

SERIAL VERB CONSTRUCTIONS
IN MANDARIN CHINESE AND JINJIANG SOUTHERN MIN

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TABLE OF CONTENTS

GLOSSING CONVENTIONS	9
ABSTRACT	11
DECLARATION	12
COPYRIGHT	13
ACKNOWLEDGEMENTS	14
PART ONE INTRODUCTION	17
CHAPTER ONE: AN INTRODUCTION OF THE STUDY	17
CHAPTER TWO: THEORETICAL FRAMEWORK AND DIAGNOSTICS	24
2.1 DEFINITION.....	24
2.2 CLAUSE STRUCTURE.....	26
2.3 ARGUMENT STRUCTURE.....	32
2.4 ARGUMENT STRUCTURE IN SVCs AND BI-CLAUSAL STRUCTURES.....	34
2.5 INTER-CLAUSAL DIAGNOSTICS.....	42
2.5.1 <i>Negation</i>	43
2.5.2 <i>Passivisation of the object of V2</i>	51
2.5.3 <i>Independent temporal location</i>	57
2.5.3.1 <i>Macro-Event Property</i>	57
2.5.3.2 <i>Tense</i>	59
2.5.3.3 <i>Temporal Adverbial Modification</i>	60
2.5.4 <i>Independent marking of viewpoint aspect</i>	62
2.5.5 <i>Independent modification by manner adverbial</i>	66
2.5.6 <i>Prosodic structure</i>	73
2.5.7 <i>Coordinate Structure Constraint</i>	76
2.5.8 <i>Other diagnostics</i>	79
2.5.8.1 <i>Marking of coordination and subordination</i>	79
2.5.8.2 <i>Illocutionary force and mood</i>	80
2.5.8.3 <i>Marking of nominalisation or relativisation</i>	83
2.5.9 <i>Interim Summary</i>	85
2.6 SYNTACTIC SUB-TYPES OF SVCs.....	86
2.6.1 <i>Nuclear and Core SVCs</i>	86
2.6.2 <i>Predicate Fusion and Argument Fusion</i>	87
2.6.3 <i>Event Fusion, Merger and Nuclear SVCs</i>	89
2.6.4 <i>Argument realisation in Mandarin Nuclear SVCs</i>	91
2.6.5 <i>V-V compound verbs and Nuclear SVCs</i>	98
2.6.6 <i>Argument Fusion, Coindexation and Core SVCs</i>	100
2.6.7 <i>Argument realisation in Mandarin Core SVCs</i>	102
2.6.8 <i>Interim Summary</i>	103

2.7 INTRA-CLAUSAL DIAGNOSTICS.....	104
2.7.1 <i>Other existing intra-clausal diagnostics</i>	104
2.7.2 <i>Intra-clausal Diagnostics</i>	110
2.7.2.1 Passivisation of O1.....	111
2.7.2.2 Insertion of intervening material.....	112
2.7.2.3 Coordination within the SVC.....	114
2.7.2.4 Obligatory topicalisation of the undergoer argument.....	116
2.7.2.5 Interim Summary.....	118
2.8 SUMMARY.....	118
CHAPTER THREE: DATA RESOURCES AND GRAMMATICAL CATEGORIES IN JINJIANG SOUTHERN MIN	120
3.1 DATA RESOURCES	120
3.1.1 <i>Fieldwork setting and data collection</i>	120
3.1.2 <i>Presentation and interpretation of data</i>	123
3.2 LANGUAGE PROFILE OF JSM IN SINITIC LANGUAGE FAMILY	124
3.3 ESSENTIAL GRAMMATICAL CHARACTERISTICS OF JSM	125
3.3.1 <i>Phonology</i>	125
3.3.1.1 Consonants	125
3.3.1.2 Vowels	126
3.3.1.3 Syllable structure	127
3.3.1.4 Tones.....	127
3.3.1.4.1 Original tones.....	128
3.3.1.4.2 Tone sandhi	128
3.3.1.4.3 Synchronic constraints on tone sandhi.....	129
3.3.2 <i>Morpho-syntactic categories</i>	130
3.3.2.1 Nouns and noun phrases.....	130
3.3.2.2 Verbs and the verbal complex.....	130
3.3.2.3 Clause structure	131
3.3.2.4 Markers of viewpoint aspects (or grammatical aspects)	131
3.3.2.4.1 Progressive marking.....	132
3.3.2.4.2 Durative marking	132
3.3.2.4.3 Perfective marking	133
3.3.2.4.4 Experiential marking.....	134
3.3.2.4.5 Marking of a future eventuality	135
3.3.2.5 Negatives	135
3.3.2.5.1 <i>m</i> ‘not’	135
3.3.2.5.2 <i>bo</i> ‘not’	136
3.3.2.5.3 <i>be</i> ‘not (yet)’.....	138
3.3.2.5.4 <i>bue</i> ‘not’	139
3.3.2.6 Topicalisation of an undergoer argument	142
3.3.2.6.1 Pre-transitive markers <i>kan</i> and <i>tsiong</i>	142
3.3.2.6.2 Unmarked topicalisation	143
3.3.2.7 Passive marker <i>khih</i> ‘lit. give’	145

PART TWO NUCLEAR SERIAL VERB CONSTRUCTIONS.....147

CHAPTER FOUR: CAUSE-EFFECT SERIAL VERB CONSTRUCTION148

4.1 SUB-TYPES OF THE CAUSE-EFFECT SERIAL VERB CONSTRUCTION	148
4.2 INTER-CLAUSAL DIAGNOSTICS	154
4.2.1 <i>Passivisation of the object of V2</i>	154
4.2.2 <i>Other inter-clausal diagnostics</i>	157
4.3 INTRA-CLAUSAL DIAGNOSTICS.....	159
4.3.1 <i>Passivisation of O1</i>	159
4.3.2 <i>Insertion of intervening material</i>	160
4.3.2.1 Transitive V1 and intransitive V2.....	160
4.3.2.2 Transitive V1 and transitive V2.....	161
4.3.2.3 Intransitive V1 and Intransitive V2	161
4.3.2.4 (Di)transitive V1 and transitive V2	162
4.3.2.5 Ditransitive V1 and ditransitive V2.....	163
4.3.3 <i>Coordination within the SVC</i>	163
4.3.3.1 Transitive V1 and intransitive V2.....	163
4.3.3.2 Transitive V1 and transitive V2.....	164
4.3.3.3 Intransitive V1 and intransitive V2.....	164
4.3.3.4 (Di)transitive V1 and transitive V2	165
4.3.3.5 Ditransitive V1 and ditransitive V2.....	166
4.3.4 <i>Obligatory topicalisation of the undergoer argument(s)</i>	166
4.3.4.1 Expressions with only one object.....	167
4.3.4.2 Expressions with two objects	168
4.3.4.2.1 (Di)transitive V1 and transitive V2.....	168
4.3.4.2.2 Ditransitive V1 and ditransitive V2	169
4.4 SUMMARY.....	170

CHAPTER FIVE: MANNER-MOTION SERIAL VERB CONSTRUCTION172

5.1 INTRODUCTION	172
5.2 INTER-CLAUSAL DIAGNOSTICS	173
5.3 INTRA-CLAUSAL DIAGNOSTICS.....	176
5.4 SUMMARY.....	177

PART THREE CORE SERIAL VERB CONSTRUCTIONS.....179

CHAPTER SIX: RESULTATIVE SERIAL VERB CONSTRUCTION.....180

6.1 INTRODUCTION	180
6.2 INTER-CLAUSAL DIAGNOSTICS	184
6.2.1 <i>Negation</i>	184
6.2.2 <i>Passivisation of the object of V2</i>	186
6.2.3 <i>Independent modification by temporal adverbial</i>	187
6.2.4 <i>Independent marking of viewpoint aspect</i>	188
6.2.5 <i>Independent modification by manner adverbial</i>	188
6.2.6 <i>Prosodic structure</i>	189
6.2.7 <i>Interim Summary</i>	190

6.3 INTRA-CLAUSAL DIAGNOSTICS.....	190
6.3.1 <i>Passivisation of OI</i>	190
6.3.2 <i>Insertion of intervening material</i>	191
6.3.3 <i>Coordination within the SVC</i>	192
6.3.4 <i>Obligatory topicalisation of the undergoer argument</i>	193
6.3.5 <i>Interim Summary</i>	195
6.4 SUMMARY.....	195
CHAPTER SEVEN: EXCESSIVE SERIAL VERB CONSTRUCTION	197
7.1 INTRODUCTION	197
7.2 INTER-CLAUSAL DIAGNOSTICS	199
7.2.1 <i>Negation</i>	199
7.2.2 <i>Passivisation of the object of V2</i>	199
7.2.3 <i>Independent modification by temporal adverbial</i>	200
7.2.4 <i>Independent marking of viewpoint aspect</i>	200
7.2.5 <i>Independent modification by manner adverbial</i>	200
7.2.6 <i>Prosodic structure</i>	201
7.2.7 <i>Interim Summary</i>	202
7.3 INTRA-CLAUSAL DIAGNOSTICS.....	202
7.3.1 <i>Passivisation of OI</i>	202
7.3.2 <i>Insertion of intervening material</i>	202
7.3.3 <i>Coordination within the SVC</i>	203
7.3.4 <i>Obligatory topicalisation of the undergoer argument</i>	205
7.3.4.1 <i>Result</i>	205
7.3.4.2 <i>An explanation of the obligatory topicalisation in the ESVC</i>	206
7.3.5 <i>Interim Summary</i>	212
7.4 SUMMARY.....	212
CHAPTER EIGHT: INSTRUMENTAL SERIAL VERB CONSTRUCTION	214
8.1 INTRODUCTION	214
8.2 INTER-CLAUSAL DIAGNOSTICS	216
8.2.1 <i>Negation</i>	216
8.2.2 <i>Passivisation of the object of V2</i>	220
8.2.3 <i>Independent modification by temporal adverbial</i>	222
8.2.4 <i>Independent marking of viewpoint aspect</i>	224
8.2.5 <i>Independent modification by manner adverbial</i>	228
8.2.6 <i>Prosodic structure</i>	229
8.2.7 <i>Interim Summary</i>	230
8.3 INTRA-CLAUSAL DIAGNOSTICS.....	230
8.3.1 <i>Passivisation of OI</i>	230
8.3.2 <i>Insertion of intervening material</i>	232
8.3.3 <i>Coordination within the SVC</i>	232
8.3.4 <i>Obligatory topicalisation of the undergoer argument</i>	234
8.3.5 <i>Interim Summary</i>	235
8.4 SUMMARY.....	235

CHAPTER NINE: CAUSED-MOTION SERIAL VERB CONSTRUCTION 236

9.1 INTRODUCTION	236
9.2 INTER-CLAUSAL DIAGNOSTICS	243
9.2.1 <i>Negation</i>	243
9.2.2 <i>Passivisation of the object of V2</i>	246
9.2.3 <i>Independent modification by temporal adverbial</i>	252
9.2.4 <i>Independent marking of viewpoint aspect</i>	254
9.2.5 <i>Independent modification by manner adverbial</i>	256
9.2.6 <i>Tone sandhi</i>	259
9.2.7 <i>Interim Summary</i>	259
9.3 INTRA-CLAUSAL DIAGNOSTICS	259
9.3.1 <i>Passivisation of O1</i>	259
9.3.2 <i>Insertion of intervening material</i>	260
9.3.3 <i>Coordination within the SVC</i>	260
9.3.4 <i>Obligatory topicalisation of the undergoer argument</i>	265
9.3.5 <i>Interim Summary</i>	267
9.4 SUMMARY	268

CHAPTER TEN: PURPOSIVE SERIAL VERB CONSTRUCTION270

10.1 INTRODUCTION	270
10.2 INTER-CLAUSAL DIAGNOSTICS	273
10.2.1 <i>Negation</i>	273
10.2.2 <i>Passivisation of the object of V2</i>	278
10.2.3 <i>Independent modification by temporal adverbial</i>	290
10.2.4 <i>Independent marking of viewpoint aspect</i>	293
10.2.5 <i>Independent modification by a manner adverbial</i>	299
10.2.6 <i>Prosodic structure</i>	303
10.2.7 <i>Interim Summary</i>	304
10.3 INTRA-CLAUSAL DIAGNOSTICS	304
10.3.1 <i>Passivisation of O1</i>	304
10.3.2 <i>Insertion of intervening material</i>	305
10.3.3 <i>Coordination within the SVC</i>	305
10.3.3.1 <i>Coordination of V1O1 in the T1 PSVC</i>	305
10.3.3.2 <i>Coordination of V2O2 in the T1 PSVC</i>	307
10.3.3.3 <i>Coordination in the T2 PSVC</i>	308
10.3.4 <i>Obligatory topicalisation of the undergoer argument</i>	311
10.3.5 <i>Interim Summary</i>	312
10.4 SUMMARY	313

CHAPTER ELEVEN: CONCLUSION AND DISCUSSION314

11.1 CONCLUSION	314
11.2 DISCUSSION	318
11.2.1 <i>Passivisation of O2 in the sub-type 2 of the PSVC</i>	318
11.2.2 <i>Some subject-oriented expressions of SVC</i>	321

11.2.3 Topic position of the undergoer argument in obligatory topicalisation 326

REFERENCES.....330

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LIST OF TABLES

Table 1. <i>Lexical Reduplication</i>	99
Table 2. <i>Jinjiang Southern Min Consonant Inventory (excluding zero initial)</i>	126
Table 3. <i>Monothongs in Jinjiang Southern Min</i>	127
Table 4. <i>Original tones in Jinjiang Southern Min</i>	128
Table 5. <i>Tone sandhi patterns in Jinjiang Southern Min</i>	129
Table 6. <i>Behaviours of SVCs in MC and JSM with regard to ten diagnostics (excluding CSC)</i>	317

GLOSSING CONVENTIONS

Atr	actor
C	core
C-E SVC	Cause-Effect Serial Verb Construction
Ch	chapter
CL	clause
CLF	classifier
COR	coordination
CR	criterion
CSVC	Caused-Motion Serial Verb Construction
DM	discourse marker
DUR	durative aspect marker
EPR	experiencer
ESVC	Excessive Serial Verb Construction
EXP	experiential aspect marker
FOC	focus
FUT	future tense
iNEG	independent negation
INS	insertion of intervening material
IP	inflectional phrase
INSTR	instrumental
ISVC	Instrumental Serial Verb Construction
JSM	Jinjiang Southern Min
LCS	Lexical Conceptual Structure
LE	excessive <i>le</i>
LVC	light verb construction
MAN	independent modification by manner adverbial
MC	Mandarin Chinese
MEP	macro-event property
MSVC	Manner-Motion Serial Verb Construction
MVC	multi-verb construction
N	nucleus
NEG	negative marker
NP	noun phrase
Nuc	nuclear
O	object
OBJ	object
OBT	obligatory topicalisation
P	periphery
PART	particle
PASS	passive marker or passivisation
PASS ₁	passivisation of O1

PASS ₂	passivisation of the object of V2
PFV	perfective aspect marker
PN	person name
PNT	patient
POSS	possessive marker
PP	prepositional phrase
PROG	progressive aspect marker
PRE	pre-transitive marker
REAL	realis mood
REL	relative marker
RSVC	Resultative Serial Verb Construction
SEM	semantic level of argument structure
STM	Southern Min
SUB	subject
SUBORD	subordinate clause marker
SVC	serial verb construction
SYN	syntactic level of argument structure
T1 PSVC	sub-type 1 of the Purposive SVC
T2 PSVC	sub-type 2 of the Purposive SVC
TEMP	independent modification by temporal adverbial
THM	theme
TOP	topic or topicalisation
TS	tone sandhi
Udg	undergoer
V	verb
V-ASP	independent marking of viewpoint aspect
3SG	third person singular

ABSTRACT

This study identifies two syntactically distinguishable types of Serial Verb Constructions (SVCs) in Mandarin Chinese (MC) and Jinjiang Southern Min (JSM), corresponding to the nuclear and core distinction made in Role and Reference Grammar (Foley and Van Valin 1984, Foley and Olson 1985, Van Valin and LaPolla 1997). This distinction is also made on the basis of a general consensus of the cross-linguistic classifications of the processes of monoclausal multi-verb construction formation (e.g., Butt 1993, 1997, Baker and Harvey 2010): namely, predicate fusion and argument fusion. In this study, I propose two sets of diagnostics to establish the distinction; these go beyond the range covered in previous studies (e.g., Olson 1981, Foley and Olson 1985, Crowley 2002, Chang 2007).

In the first set of diagnostics in this study, seven inter-clausal diagnostics are considered as the threshold where the behaviours of bi-clausal structures and SVCs split. These diagnostics include independent negation, passivisation of the object of V2, independent modification by temporal adverbial, independent marking of viewpoint aspect, independent modification by manner adverbial, prosodic structure and the Coordinate Structure Constraint (Ross 1967) that is employed in a more restricted manner. In the second set of diagnostics, four intra-clausal diagnostics are adopted to make the distinction between nuclear and core SVCs, which include passivisation of O1, insertion of intervening material, coordination within the SVC, and obligatory topicalisation of undergoer argument. Of particular interest is the possibility that the same string of verbs may occur in superficially similar, but structurally different, SVCs: for example, the Cause-Effect SVC and the Excessive SVC.

The diagnostics employed in this study are proposed as a novel method to establish the distinction between the SVCs and the bi-clausal structures, and more importantly, between core and nuclear types of SVC. Contributing to the originality of the new method of diagnosing the status of the SVCs proposed in this study, I add five novel diagnostics, such as passivisation of the object of V2, independent marking of viewpoint aspect, tone sandhi between adjacent verbs, coordination within the SVC and obligatory topicalisation of the undergoer argument, in addition to those that have been employed in the literature.

I restrict myself to data of MC and JSM in discussing the rationale of the diagnostics. However, this novel method of identifying SVCs is expected to be cross-linguistically applicable with consistent results, while at the same time allowing for the possibility of cross-linguistic differences in the semantic sub-types of SVCs identified in each language.

DECLARATION

I declare that no portion of this work referred to in this thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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PART ONE Introduction

Chapter One: An introduction of the study

Serial Verb Constructions (hereafter SVCs) consist of a string of verbs which are not connected by any conjunction marker and form a single clause. The form of SVCs can be represented as below.

(1) [(NP) V (NP) V (NP) V (NP)]_{CL}

In this study, I describe and compare the characteristics of a large range of SVCs in Mandarin Chinese (MC hereafter) and a variety of Southern Min (STM hereafter), Jinjiang Southern Min (JSM hereafter) in Mainland China. For the description and comparison of various types of SVCs in the two Sinitic varieties, I propose two sets of syntactic diagnostics, not only to distinguish SVCs from bi-clausal structures but also to differentiate sub-types of SVCs. The two sets of diagnostics are expected to be cross-linguistically applicable with consistent results, while at the same time allowing for the possibility of cross-linguistic differences in the semantic sub-types of SVCs identified in each language.

A few examples of SVCs in MC and JSM are shown in (2)-(5). MC expressions of SVCs in my study are obtained partly by introspection and partly from the existing literature. JSM expressions of SVCs are collected via my own fieldwork¹.

¹ For each example presented in this study, I provide the information, such as the language profile (e.g., MC or JSM), pronouncing presentation of the expression, its interlinear glossing, free translation and citation of the source of data. If the example was collected via my own fieldwork, the metadata of it is provided at the bottom line including the file name and the starting and the ending times of the clip in the audio clip. For more details about data collection, presentation and interpretation of the data in this thesis, see Section 3.1.1. Numbering of examples restarts for each chapter.

MC

(2) *Wo da si le cangying.*
I hit die PFV fly
'I hit the fly dead.' or 'I killed the fly.'

(3) *Wo na dao qie le rou.*
I take knife cut PFV meat
'I cut the meat with a knife.'

JSM

(4) *I thiah phua hit tiunn tsua lo.*
3SG tear be.broken that CLF paper DM
'S/he tore that piece of paper apart.'
00:38:51.440 - 00:38:53.550 B15-31 VR0001 29-4-14

(5) *Abu kiah phothau phua tsha.*
mother take axe chop branches
'Mother chopped the branches with an axe.'
00:10:16.350 - 00:10:18.660 MT 98-105 140614_03 15-5-14

This study aims to address three research questions. Without any morphological marking, it is not clear whether the component verbs in (2)-(5), regardless of their contiguity, occur in the same clause or are distributed in different clauses. This leads to the first research issue that my study aims to address, as provided in RQ1.

RQ1: How can SVCs be distinguished from superficially similar bi-clausal structures?

The first question has to do with the notion of "monoclausality". The first step of this investigation of SVCs concerns how the monoclausality of SVCs can be diagnosed. In other words, in what respects can these monoclausal multi-verb constructions be

differentiated from bi-clausal structures in a given language? As I will show in Section 2.5, the monoclausality of SVCs can be identified with regard to the inter-clausal diagnostics I propose. Applicability of a number of inter-clausal diagnostics is justified in my study by reviewing existing diagnostics of the status of SVCs on the basis of my observations of MC and JSM data. Some other inter-clausal diagnostics are novel and only proposed in my study as applicable to MC and JSM expressions.

Expressions that pass the filter of monoclausality may still exhibit different predicate structures, as pointed out in Butt (1993, 1997) and Baker and Harvey (2010). Therefore, the second research question is concerned with what differences can be observed between sub-types of SVCs and how they can be diagnosed, as provided in RQ2.

RQ2: What characteristics can be adopted to establish syntactic sub-types of SVCs in a given language?

The most obvious difference amongst expressions (2)-(5) lies in the (non-)contiguity between the component verbs. From the surface form, examples (2) and (4) seem to constitute the same type of SVC as opposed to examples (3) and (5), which seem to be expressions of another type of SVC. My analysis in Sections 2.6-2.7 suggests that SVCs can be divided into two sub-types in terms of their syntactic structure: one type of SVC (i.e., the nuclear SVC) exhibits a tight structure, and the SVC functions on a par with a simple predicate in terms of argument structure and constituency; the structure of the other type (i.e., the core SVC) is relatively looser, as each verb in it exhibits partial independence from the other in terms of argument structure. Moreover, correlating with different syntactic structures, the first type of SVC manifests argument realisation at the semantic level of argument structure, while the second type of SVC manifests argument realisation mainly at the syntactic level of argument structure (see Sections 2.3-2.4 for argument structure and Section 2.6 for nuclear and core SVCs). Their distinct syntactic structures can be revealed with regard to a set of linguistic diagnostics that I adopt in this study (more precisely, the intra-clausal diagnostics; see Section 2.7.2). While

non-contiguity between serial verbs is a sufficient condition of a particular syntactic sub-type of SVC, contiguity between verbs is not (see the Excessive SVC in Ch. 7).

Since this study is specifically about investigations of the status of SVCs in MC and JSM, it also focuses on a comparison between the two Sinitic varieties in terms of the classification of SVCs, hence the third issue, provided in RQ3.

RQ3: Are there any similarities and differences concerning the range of the sub-types of SVCs observed in MC and JSM?

In other words, the question is whether the same sub-types of SVCs, in terms of argument structure or semantics, can be consistently identified in the two varieties. The analysis of different sub-types of SVCs in MC and JSM provides the basis for such a comparative study. As I will show later, the distinction established between the two syntactic sub-types of SVCs equally applies to MC and JSM. However, the range of semantic sub-types of SVCs differs in the two varieties. Details can be found in Ch. 4 on the Cause-Effect SVC, in Ch. 6 on the Resultative SVC, and in Ch. 7 on the Excessive SVC. A summary of these similarities and differences can be seen in Section 11.1.

This study aims at addressing the above three issues about SVCs in two Sinitic varieties from a theory-neutral perspective. Although it draws on the distinction of Nuclear vs. Core serialisations and the layered clause structure in the Role and Reference Grammar literature, it also shows that this distinction of two syntactic sub-types of SVC shares similarities with existing classifications of two different types of monoclausal multi-verb construction in other frameworks (Section 2.6). Moreover, the model of two-level argument structure adopted in this study deviates from the layered structure in the Role and Reference Grammar framework in that it takes semantic entailments into account at the semantic level and at the interface between the semantic level and the syntactic level (Sections 2.2 and 2.3); and it includes the grammatical functions of

subject and object at the syntactic level of argument structure (Sections 2.3 and 2.4). It should also be noted that the model of the two-level argument structure has been widely adopted in cross-linguistic studies to account for a series of linguistic phenomena that would be left unexplained if otherwise; see for example Butt (1993), Mohanan (1994), Goldberg (1995) and Schultze-Berndt (2000) (also see Section 2.3 for more details).

In this study, I restrict myself to examining SVCs and bi-clausal structures that consist of two verbs, as I assume that the structures that form on the basis of two verbs rather than more exhibit the basic patterns of multi-verb construction formation. Structures that consist of more verbs may involve more complicated patterns, study of which should, however, always be based on the more fundamental patterns.

In the present study of SVCs, I do not examine idiomatic expressions in this study. Idioms that are conventionalised and no longer productive do not serve as proper candidates in my analysis of SVCs. Also, I exclude the (in)ability construction (or the potential “能性” construction) from my analysis, such as *xi de/bu ganjing* ‘can/cannot wash...clean’. According to Wu (2002a, b) amongst others, the ability construction (with *de* ‘lit. obtain’) has its origin as serial verbs which employed the verb *de* ‘obtain’ as its V2 to denote realisation of a resultant state. It was the change of the context (presumably from denoting a realised event to denoting an unrealised situation) that causes the whole expression to switch from denoting an actual result caused by a preceding action (realised) to denoting a kind of modality (unrealised), therefore a process of grammaticalisation. Despite a different historical origin of the construction, the construction with the negative *bu* ‘not’ between the two component verbs has also grammaticalised such that it functions as the negative counterpart of the positive ability construction (with *de* ‘lit. obtain’)². Given the grammaticalised status of the construction, I do not consider the (in)ability construction as a type of SVC in my analysis.

² However, see Liu (1992) and Sugimura (1992) amongst others for the details that, the ability construction (with *de* ‘lit. obtain’) and the inability construction (with *bu* ‘not’) in MC are in fact not symmetrical in terms of the positive-negative features..

In MC, and presumably in JSM as well, there are a number of grammaticalised morphemes that also have a verbal counterpart, such as *zhu* ‘live’, *hao* ‘be good’ and *wan* ‘finish’. These grammaticalised morphemes generally occur after a main verb in an expression to denote grammatical aspects (or “phase” in e.g., Li and Thompson (1989, 65-67)), such as *zhan zhu* ‘stand still’, *xie hao* ‘complete the task of writing’ and *nong wan* ‘finish doing’. I do not consider these grammaticalised expressions in my study of SVCs either (see a similar treatment in Chang (2007, 236)), since their second morphemes have more or less lost their verbal status. In other words, these second morphemes do not have the same semantic specifications that they have as simple verbs. Excluding grammaticalised constructions from discussion of genuine SVCs is a point also suggested by Bisang (2001, 2009)³.

This thesis is structured as follows: In Part One, Chapter Two introduces the theoretical foundations adopted in this thesis and illustrates the two sets of linguistic diagnostics that are employed in this study to distinguish SVCs from bi-clausal structures and between different syntactic sub-types of SVCs (i.e., the nuclear and core SVCs) in MC and JSM. Chapter Three mainly provides the information about the fieldwork setting, data collection and interpretation. In addition, grammatical characteristics of JSM that are closely related to the diagnostics in this study are introduced.

Part Two includes two individual chapters. They are devoted to discussing syntactic and semantic characteristics of the two semantic sub-types of nuclear SVCs in MC and JSM. Chapter Four discusses the Cause-Effect SVC. Chapter Five discusses the Manner-Motion SVC. Both sub-types of nuclear SVCs demonstrate the monoclausality with respect to the inter-clausal diagnostics, while they exhibit a tight structure with regard to the intra-clausal diagnostics.

³ I include verb combinations, in which a component verb is “give” or “use”, as expressions of SVCs, as they exhibit verbal properties in MC and JSM (for details, see Ch. 4 on the Cause-Effect SVC, Ch. 6 on the Resultative SVC and Ch. 8 on the Instrumental SVC). I do not assume any change of semantic specification of these verbs in and outside the SVCs.

Part Three includes five individual chapters. They are devoted to discussing syntactic and semantic characteristics of five semantic sub-types of core SVCs. All of these show the monoclausality with respect to the inter-clausal diagnostics, while they exhibit a looser structure with respect to the intra-clausal diagnostics, as opposed to the nuclear SVCs. Not every semantic sub-type of core SVCs can be consistently identified in both MC and JSM. As I will show in Chapter Six, not every sub-type of the Resultative SVC can be found in both varieties. Chapter Seven introduces the Excessive SVC, which consists of two adjacent verbs at the surface form and is only attested in MC. Despite its monoclausality and its superficial resemblance to the nuclear SVCs that are discussed in Part I, the Excessive SVC is identified as a core SVC by the intra-clausal diagnostics. Chapter Eight illustrates the syntactic and semantic characteristics of the Instrumental SVC, a core SVC attested in both MC and JSM. Chapter Nine discusses the Caused-Motion SVC, which is likewise attested in both Sinitic varieties with the characteristics of a core SVC. Chapter Ten discusses two sub-types of the Purposive SVC – both core SVCs – in terms of the transitivity of its component verbs. Chapter Eleven concludes the thesis and points out possible directions for further studies on SVCs.

Chapter Two: Theoretical framework and diagnostics

In this chapter, I present the framework assumed in this study for the analysis of SVCs and their argument structure. I discuss the differences between two syntactic sub-types of SVCs, in particular, how the relationship between component verbs differs and how the pattern of argument realisation differs between the two syntactic sub-types. This chapter also illustrates two sets of linguistic diagnostics that are adopted in this study to establish the distinction between SVCs and bi-clausal structures and between syntactic sub-types of SVCs on the basis of both MC and JSM data.

This chapter is structured as follows. Section 2.1 briefly discusses the defining characteristics of SVCs in cross-linguistic studies and introduces the current situation of studies on the Sinitic SVCs. Section 2.2 introduces the basic clause structure in MC. Section 2.3 discusses the argument structure assumed in this study. Section 2.4 illustrates the difference between SVCs and bi-clausal structures in terms of argument structure. Section 2.5 introduces the first set of diagnostics that are employed in this study to distinguish SVCs from bi-clausal structures. Section 2.6 discusses classifications of syntactic sub-types of SVCs and related multi-verb constructions in the literature. Argument realisation patterns of the Mandarin SVCs are also discussed on the basis of reviewing some existing analyses. Section 2.7 reviews some existing studies on classifying syntactic sub-types of SVCs and provides the second set of diagnostics adopted in the current study to establish syntactic sub-types of SVCs.

2.1 Definition

A SVC consists of a string of verbs which are not connected by conjunction markers and form a single clause. A number of definitions of SVCs can be found in existing typological studies. Instead of exhausting the available definitions in this thesis, I list

the common features recurrently adopted to characterise SVCs in cross-linguistic investigations (Foley and Olson 1985, 18, Sebba 1987, 1, Baker 1989, 547, Seuren 1991, Déchaine 1993, 799, Pawley 1993, 95, 117, Bisang 1995, 139, Collins 1997, 462, Durie 1997, 291, Aikhenvald 2006, 1, Dixon 2011, 188, Jarkey 2015, Ch. 2):

- a. juxtaposition of two or more verbs
- b. act as a single verb in terms of tense, aspect, polarity, and intonation
- c. no conjunction marker
- d. no syntactic dependency
- e. share core argument(s)
- f. denote a single event

Despite the detailed syntactic and semantic characteristics in these definitions of SVCs, how to distinguish SVCs from other superficially similar constructions in a given language has never been an easy task. In investigations of SVCs, such a phenomenon may show universal characteristics while at the same time allowing some language-specific variation (e.g., Durie 1997, Aikhenvald 2006, Bisang 2009). Some studies of SVCs attempt to define this phenomenon by constraining it with one or two syntactic features, object sharing in particular (e.g., Baker 1989, Collins 1997). However, cross-linguistic observations of the semantic and syntactic characteristics of SVCs show the limits of doing so. A classic argument in this regard is Durie (1997).

As far as studies on SVCs in the Sinitic languages are concerned, MC is the variety that has received the most in-depth investigations of the syntax and semantics of SVCs. Some studies emphasise the formal and syntactic properties of Mandarin SVCs, such as the co-occurrence of multiple verbs, non-occurrence of conjunction markers, existence of a single subject, switch of function on a certain argument (e.g., Chao 1968 [2011], Fan 1980, Li 1986, Shen 1986, Li and Thompson 1989, Ding et al. 1999, Lu 2002, Zhu 2011/1982). Others focus on their semantic properties, specifically the various semantic relationships between the component verbs and arguments in SVCs (e.g., Zhang 1957,

Chao 1968 [2011], Fan 1980, Li 1986, Shen 1986, Li and Thompson 1989, Chen 2000). A few studies have been devoted to the processes of grammaticalisation and lexicalisation of Mandarin SVCs (Gao 2003, 2006). In a comparison with studies on Mandarin SVCs, there are only a few studies on SVCs in STM, including research conducted in both Mainland China and Taiwan. For example, Chen (2005) describes various types of SVCs in Hui'an STM in China. Such a study on SVCs, however, only deserves one chapter in her entire thesis. Focusing on the syntactic characteristics of SVCs in Taiwan STM, the MA thesis by Yan (2004) is a more detailed study that is devoted to establishing a distinction between SVCs (that consist of two verbs or more) from other similar multi-verb constructions.

Despite the considerable amount of studies on Sinitic SVCs, the debate about the defining characteristics of SVCs is ongoing (see review studies in Paul 2008, Peng et al. 2013 and an overview study provided by Bisang (forthcoming-b)). It should also be noted that traditional studies of Mandarin SVCs deviate from cross-linguistic studies on SVCs in the scope of their analyses (Peng et al. 2013, 332). A large number of Chinese studies on SVCs do not consider the nuclear SVCs, such as the Cause-Effect SVC and the Manner-Motion SVC, as a syntactic sub-type of SVC. They treat them as compounds, see for example, Li and Thompson (1989), Li (1990b) and Cheng and Huang (1994). As I will show in Section 2.6.5, nuclear SVCs should be differentiated from V-V compounds with regard to the diagnostic of reduplication, which is a derivational process that can be applied to lexical items, but not to syntactic constructions.

2.2 Clause structure

To begin with, I will introduce the layered structure in Role and Reference Grammar (RRG hereafter) before discussing the clause structure that I envisage in this study. I adopt the layered structure in RRG in analysing clause structure and the structure of

SVCs in this study (Foley and Van Valin 1984, Van Valin and LaPolla 1997) (but also see Ch. 1 for a statement of the status of the RRG in my analysis).

In RRG, a clause consists of three layers: the nucleus, the core and the clause. The nucleus takes the most internal layer in the clause, which commonly includes a verb. The core layer consists of the nucleus and core arguments. The outermost layer is the clause. This layer contains the core (the nucleus is inside a core) and the periphery which usually encodes spatial-temporal information. An example labelled with clausal layers is provided in (1), with the initial letters of the names of layers as the subscripted capital letters.

(1) [_{CL} [_C I [_N ate _N] noodles _C] [_P at the restaurant _P] _{CL}].

In (1), *ate* is the nucleus. The nucleus and its arguments form the core *I ate noodles*. The periphery *at the restaurant* provides the spatial information as to where the event took place, thus is the modifier of the core.

As pointed out in Jarkey (2015), in the latest version of RRG (Van Valin 2005), due to the modifier status of peripheral information that may occur at any layer, linking cores with different peripheries may result in clause adjoining. In Sections 2.5.3 and 2.5.5, I will show that only bi-clausal structures allow distinct clausal-layer information (e.g., independent modification by temporal adverbials and manner adverbials) to modify each core as opposed to SVCs.

Different layers correspond with different operators in the RRG framework. These operators are also involved in some diagnostics of the present study. For example, negation can be either a nuclear operator or a core one; modal verbs are considered as core operator; temporal adverbials are construed within the periphery and are considered as clausal-layer operator.

It should be noted that although I adopt the layered structure established in the RRG framework, in the modal of argument structure that I adopt for description and explanation of formation of SVCs in the present study, grammatical functions of subject and object are postulated in MC and JSM syntax, unlike RRG. The necessity of doing so is mainly due to the process of promotion of the original object and demotion of the original subject observed in the canonical *bei*-passive in a particular diagnostic employed in this study (see Section 2.5.2) and the advantage of including the two grammatical functions in a two-level argument structure in an account for the formation of different syntactic sub-types of SVC in this study (see Section 2.3 argument structure; a clear example of the advantage is discussed in depth in Ch. 7).

Establishing the basic clause structure, in particular the transitive clause, involves identification of grammatical functions. It has been argued that MC does not have these grammaticalised functions; see a detailed study by LaPolla (1990). Keenan (1976) suggests three types of criteria for the definition of “subject”, including coding properties, semantic characteristics, and behavioural and control properties. Given that MC employs only little morphology, it is not possible to code subject and object via morphological marking (e.g., LaPolla 1990). While studies have been using the distributive pattern in the expression as a criterion of identifying the two grammatical relations – the subject generally occurs pre-verbally while the object follows the verb – the criterion can only be applied in the absence of a topic (e.g., Li and Thompson 1989, Her 1991, Huang 2013). Although some studies also suggest that there is a tendency of adopting subject-control anaphora in MC expressions (Givón 1995, 250, Huang 2013, 101), findings have shown that it is not restricted to the subject that can function as the antecedent of an anaphora (such as the reflexive pronoun *ziji* ‘self’) (e.g., LaPolla 1990, Cole and Wang 1996, Bisang forthcoming-a). Moreover, relativisation does not serve as a sufficient criterion of distinguishing the subject and the object, since either of them can be relativised on (LaPolla 1990, 37-40)

I assume that the actor argument functions as the subject and the undergoer argument

functions as the object in a transitive clause⁴ (cf. LaPolla 1990). That is, in a transitive clause, the core argument initiating a particular activity functions as the transitive subject; by contrast, the core argument that is acted upon by the subject functions as the transitive object (see also Dixon 2010, 76-77). Moreover, the subject-object distinction in the MC transitive clause can be established on the basis of their (in)ability of undergoing passivisation: the object of the transitive clause can be passivised, while a subject cannot. In addition, as mentioned earlier, excluding the topic constructions, the subject generally occurs pre-verbally while the object occurs post-verbally (e.g., Li and Thompson 1989, Her 1991, Huang 2013). Also, as noted by Bisang (forthcoming-a), the grammatical functions *subject* and *object* can still be identified with regard to a number of syntactic tests in MC (although to a limited extent), a language that presents a high degree of hidden complexity and still exhibits its relevance of syntax.

An example of a transitive clause in MC is given in (2). The main verb is *da* ‘hit’, which is transitive and takes two core arguments in the clause. The actor *Lisi* functions as the subject that occurs before the main verb. The undergoer argument *xiaotou* ‘thief’ functions as the object that occurs after the main verb.

MC

(2) *Lisi da le xiaotou.*

PN hit PFV thief

‘Lisi hit the thief.’

The only core argument of an intransitive verb is always realised as the subject in its clause, regardless of its semantic role. The only core argument in (3) and (4) is *xiaotou* ‘thief’. It functions as the subject in both expressions, regardless of its semantic role: the thief is the actor that initiates the act of running in (3), but it is the undergoer that

⁴ This consideration may be similar to the notion of macro-roles *Actor* and *Undergoer* proposed in the RRG framework at the first glance. However, my assumption of these two semantic roles deviates from the RRG notion of macro-roles in that it takes semantic entailments (in particular, the causal relationship between two participants in an event (see e.g., Dowty (1991) and Croft (2012)) into account.

undergoes the state of change *si le* ‘died’ in (4).

MC

(3) *Xiaotou pao le.*
thief run PFV
‘The thief ran (away.)’

(4) *Xiaotou si le.*
thief die PFV
‘The thief died.’

In the light of the layered structure in RRG, I also assume that the subject and the object in Mandarin and JSM clauses are core arguments that exist in a clausal domain. Both core arguments exist at the same level in the layered structure. In other words, there is no internal or external argument assumed in the clause structure.

In the meantime, it is also noteworthy that, despite its basic word order SVO (e.g., a quantitative research by Sun and Givón 1985), MC is also characterised by flexible constituent order: a large number of topic sentences are used in discourse (e.g., Li and Thompson 1976, 1989, Shyu 2014, Xu 2015). A number of studies in the generative tradition have suggested that there are two topic positions identifiable in MC expressions: the sentence topic or the primary topic occurs above IP, i.e., outside the clause (above the subject); the internal topic, or secondary topic, or sub-topic occurs within the clause and takes the position between the subject and V1 (e.g., Xu and Liu 1998, Paul 2002, 2005, Hsu 2008, Kuo 2009). The approximate distribution of the two topic positions in MC that are argued in these studies can be represented in (5).

(5) TOP>>_{IP}[SUB>>TOP>>...V1>>...]

A complete discussion on the characteristics of different topics in MC is beyond the

scope of my study. Nevertheless, by adopting the layered structure in RRG and assuming that there is no hierarchy between arguments, I assume that in addition to the syntactic and semantic layers (see Section 2.3 argument structure), there is also a pragmatic layer, where a periphery argument or one of the core arguments can be given topic status. Note that this treatment does not exclude the subject from consideration of topic status. That is, three topic positions are assumed to exist at the same level in the pragmatic layer. To be more precisely, in addition to the subject, which is considered as a kind of pre-verbal default topic (Li and Thompson 1976, 484, Givón 2001, 196), I also assume that there is one clause-external topic (or the sentence topic) that usually occurs before the subject, and a secondary topic (or “internal topic” as called in the related studies)⁵ that occurs after the subject and before V1.

The sentence topic and the secondary topic can be exemplified in (6) and (7) respectively. As shown in (6), *zhe zhong cai* ‘this kind of dish’ is analysed as the sentence topic (i.e., the clause-external topic) in Paul (2002). As shown in (7), *zhongyao* ‘Chinese medicine’ is analysed as the secondary topic that occurs between the subject and V1 in the simple clause.

MC

(6) *Zhe zhong cai, wo tebie xihuan.*

this kind dish I especially like

‘This kind of dish, I like particularly’

(Paul 2002, 708)

(7) *Ni zhongyao yiqian yong guo ma?*

2SG Chinese.medicine before use EXP PART

‘Have you ever taken Chinese medicine before?’

(Paul 2002, 697)

⁵ The terms secondary topic and internal topic may be used interchangeably in the thesis.

While the two types of topic (i.e., the sentence topic and the secondary topic) in MC are commonly identified in the previous studies, findings in my analysis also suggest that there might be a distinct topic position that differs from the positions taken by the sentence topic and the secondary topic. My data show that when the obligatory topicalisation⁶ of an undergoer argument occurs, this topicalised undergoer argument behaves differently from the sentence topic and the secondary topic with regard to relativisation on the subject argument. This phenomenon is observed in both MC and JSM. For more details, see Section 2.7.2.4 and Section 11.2.3. Furthermore, given the relatively flexible word order between the subject, the object and the verb, and the fact that core arguments are usually omitted in discourse (e.g., Tao 1996), I do not assume any verb phrase structure in MC.

2.3 Argument structure

Not restricted to a particular approach, a number of studies adopt the view that the argument structure of a predicate can be represented at two levels: the syntactic level and the semantic level (Butt 1993, Mohanan 1994, Goldberg 1995, Butt 1997, Mohanan 1997, Van Valin and LaPolla 1997, Schultze-Berndt 2000). This treatment of argument structure of SVCs and related expressions is the foundation of my analysis as well. The two-level elaborate argument structure in the present study has the advantages to account for some issues of SVC formation that would be left unexplained if otherwise. As an example, an in-depth discussion about the account of the formation of different multi-verb monoclausal structures by adopting an elaborate argument structure can be found in Butt (1993, 1997). Also see Section 2.7.2.4 and Section 7.3.4 for a conspicuous example of the advantage of adopting this model of argument structure to account for the formation of different syntactic sub-types of SVC in the present study).

⁶ By topicalisation, I mean the structures that take non-actor argument(s) in addition to an actor argument topicalise the non-actor argument(s) to a pre-V1 position. This position could be the sentence topic position or the secondary topic position in an expression or a position which is more syntactically related (i.e., the pre-V1 position in the case of obligatory topicalisation). By obligatory topicalisation, I mean that a non-actor core argument always exists pre-verbally rather than staying at a post-verbal position as a classic post-verbal object usually does in MC (see the discussion in Section 7.3.4.2).

In the light of the two-level argument structure, a predicative lexical item may contribute semantic arguments to the semantic level of argument structure. The number and the roles of semantic arguments are determined by the lexical semantics of the predicative lexical item. I do not assume any primitive predicates at this level to represent the relation of arguments with regard to a given predicative element. Convenient labels that reflect the roles of semantic arguments are used in this study (e.g., instrument, recipient and location). However, by doing so, I do not imply that a finite set of semantic roles are assumed in my analysis.

The syntactic level of argument structure includes information of the number and the functions of core syntactic arguments in a given expression (e.g., subject and object). I do not assume any primitive predicates at this level either.

Syntactic argument realisation is determined by both semantic and syntactic factors. For example, in a transitive clause, the subject is generally the actor and the object is the undergoer (also see Section 2.2). Therefore, in (2), the semantic actor (the hitter) of the transitive verb *da* ‘hit’ in MC is realised as the subject, while the semantic undergoer (the person who was hit) is realised as the object, as represented in (8).

(8) Argument structure of the transitive clause headed by *hit* ‘da’

SYN [SUB *Lisi*, OBJ *xiaotou* ‘thief’]

SEM [*hit* ‘da’ <Atr *Lisi*, Udg *xiaotou* ‘thief’>]

On the other hand, as I will show later (Section 2.4), patterns of syntactic argument realisation may be determined by different factors depending on the syntactic structure of a given SVC. In the nuclear SVCs, a process of semantic argument selection must be conducted at the semantic level of argument structure before the semantic arguments are realised into syntax, correlating with the process of predicate fusion in the SVC; the core SVCs generally allow all semantic arguments of each component verb to be

realised at the syntactic level, but employ a particular syntactic rule (i.e., argument fusion) to link the syntactic argument structures in the monoclausal structure. It should be noted that in my proposal for the argument structure of SVCs, I do not assume any “transparent event” or “open inner position” in the processes of predicate fusion and argument fusion, as I do not assume any change of semantic specification of the component verbs in and outside an SVC. That is, no component verbs in an SVC have an empty argument structure (cf. Butt, 1993, 1997, Baker and Harvey, 2010).

2.4 Argument structure in SVCs and bi-clausal structures

I have discussed in Section 2.3 that in my proposal, the argument structure consists of a semantic level and a syntactic level. Component verbs can only directly contribute semantic arguments, but not syntactic arguments to the SVC. Separation of the two levels of argument structure gives rise to the questions concerning argument realisation in an SVC: For an SVC, where there is a single set of syntactic arguments, when the component verbs contribute more semantic arguments than the available syntactic argument slots in the construction, how is the realisation of syntactic arguments manifested in the construction? For an SVC, where there are two separate syntactic argument structures, how are they linked with each other to accomplish argument realisation in such a monoclausal structure? Despite the above two questions, the most fundamental issue is how the different patterns of syntactic argument realisation between SVCs and bi-clausal structures can be accounted for in the light of the two-level argument structure adopted in my study. I will postpone discussion of the first two issues to Section 2.6, since they concern a crucial objective that this study aims to address, i.e., identification or classification of syntactic sub-types of SVCs (see Ch. 1). But I endeavour to address the third issue in this section.

In this study, I argue that what differentiates SVCs and bi-clausal structures in the argument structure is that SVCs do not allow the second component verb to realise its

own syntactic subject independently, while bi-clausal structures do not impose such a restriction on argument realisation. A similar argument has been made in studies of complex predicates in Urdu in the framework of Lexical Functional Grammar (LFG hereafter) by Butt (1993, 1997). Such an argument can also be found in the study of serial verbs in White Hmong by Jarkey (2015). In line with these studies, I argue that despite the fine difference in the argument structure of the identified syntactic sub-types of SVCs, they share the property of occurring within a monoclausal structure, with only one syntactic subject realised in syntax. In the following, I will elaborate on the argument realisation patterns (in particular, the subject realisation pattern) of the SVCs and the bi-clausal structures.

The nuclear sub-type of SVCs is characterised of possessing a single set of syntactic arguments. In order to be realised at the syntactic level, appropriate semantic arguments must be selected in the process of semantic argument selection at the semantic level. In such a process, the actor argument at the semantic level will be realised as the subject argument in syntax. The actor is usually the initiator of an action. The argument that is selected as the undergoer will be realised as the object argument. The undergoer is usually the receiver of the action. A similar analysis mediating semantic-syntactic argument realisation by a Proto-role assignment process can be found in Huang and Lin (1992). The status of these “grammaticalisable”⁷ semantic arguments may correspond to their positions in the “force-dynamic chain” or the “causal chain” (e.g., Croft 1991, 2012). In (9), each verb may contribute a semantic argument at the semantic level of argument structure, as represented in SEM1 and SEM2 in (10). The contributed semantic arguments undergo a selection process: the semantic argument *ta* ‘s/he’ is recognised as the actor; the other argument *shoupa* ‘handkerchief’ is recognised as the undergoer, which undergoes a change of state (i.e., become wet) due to the process (i.e., cry) initiated by the actor, as shown in SEM. They are realised in syntax as the subject and the object respectively, as shown in SYN.

⁷ In the sense of Mohanan (1994), grammaticalizable semantic arguments refer to the semantic arguments that are responsible for their representation in the syntax

MC

Cause-Effect SVC

(9) *Ta ku shi le shoupa.*

3SG cry be.wet PFV handkerchief

‘S/he cried so hard that the handkerchief got wet.’

(10) Cause-Effect SVC *ku shi* ‘cry be.wet’

SYN [SUB *ta* ‘S/he’, OBJ *shoupa* ‘handkerchief’]

SEM [Atr, Udg]

SEM1 [*ku* ‘cry’ <Atr *ta* ‘s/he’>] SEM2 [*shi* ‘be.wet’ <Udg *shoupa* ‘handkerchief’>]

From the representation of argument structure in (10), it can be seen that the sole argument of V2 *shi* ‘be wet’, *shoupa* ‘handkerchief’, is taken as the undergoer argument at the semantic level. It is then realised as the syntactic object argument. Note that this is in contrast with the fact that the sole argument of an intransitive verb is always realised as the subject in MC (see Section 2.2 Clause structure).

Realisation of the sole argument of V2 as the subject is only possible when each verb occurs in a simple clause. In (11), each of the verbs, *ku* ‘cry’ and *shi* ‘be wet’, functions as the main predicate in a simple clause. The sole argument of each verb functions as the subject in its clause. As shown in (12), a process of semantic argument selection is not necessary in this bi-clausal structure (in the absence of SEM), and the semantic argument of each verb is directly realised in a distinct argument structure at the syntactic level, as shown by SYN1 and SYN2.

MC

bi-clausal structure

(11) *Ta ku (le), shoupa shi le.*

3SG cry PFV handkerchief be.wet PFV

‘S/he cried. The handkerchief got wet.’

(12) bi-clausal with *ku* ‘cry’ and *shi* ‘be. wet’

SYN1 [SUB *ta* ‘S/he’]

SYN2[SUB *shoupa* ‘handkerchief’]

SEM1 [*ku* ‘cry’ < Atr *ta* ‘s/he’>] SEM2[*shi* ‘be.wet’ < Udg *shoupa* ‘handkerchief’>]

As I will also illustrate in Section 2.6, a core SVC possesses two separate argument structures, not unlike a bi-clausal structure in this respect. Consequently, the question arises as to how core SVCs can be differentiated from bi-clausal structures in terms of their argument structure despite this similarity. In particular, an analysis needs to account for the linking of the two sets of syntactic functions in a core SVC, if such a connection is absent or unnecessary in bi-clausal structures. In the following, I will show that in a similar manner to nuclear SVCs, core SVCs do not allow their V2s to independently realise their syntactic subject arguments, a syntactic requirement not imposed in bi-clausal structures.

This syntactic requirement of realising only one subject in the syntax of SVCs can be observed in two respects. The first possibility is that when the two cores share identical subject arguments in their argument structures, only the subject argument of the first core is realised in the syntax, while the subject argument of the second core is coindexed with the subject in the first core and is not permitted to be realised independently, given their co-referentiality. This pattern of subject argument fusion (or coindexation) is commonly observed in the core SVCs. In an Instrumental SVC, it can be seen that given the co-referentiality of the subject argument(s) of component verbs, the two same subject arguments can only be realised once in the syntax of the SVC, as shown in (13). As represented in (14), the separate argument structures contributed by the two cores must be linked in this monoclausal structure via subject argument fusion, symbolised by “=”. The identical subject argument *ta* ‘s/he’ in the second core must be deleted in the syntax, as it is coindexed with the subject argument in the first core

already.

MC

Instrumental SVC

- (13) *Ta na dao qie rou.*
3SG take knife cut meat
'S/he cuts meat with a knife.'

(14) Instrumental SVC *na* 'take' and *qie* 'cut'

SYN1 [SUB *ta* 's/he', OBJ1 *dao* 'knife'] = SYN2 [(SUB ~~*ta*~~ 's/he'), OBJ2 *rou* 'meat']

SEM1 [*na* 'take' <Atr *ta* 's/he', THM *dao* 'knife'>] SEM2[*qie* 'cut' <Atr *ta* 's/he',
PNT *rou* 'meat'>]

Contrastively, in a bi-clausal structure, the second clause allows its subject argument to be explicitly realised, in spite of its co-referentiality with the subject argument in the first clause. As shown in (15), a reflexive pronoun *ziji* 'self' is overtly expressed as the subject in the second clause, co-referring to the subject argument *ta* 's/he' in the first clause.

Bi-clausal structure

- (15) *Ta na dao ziji qie rou.*
3SG take knife self cut meat
'S/he took a knife. S/he him/herself cut the meat (with or without the same knife she took.)'

(16) bi-clausal structure with *na* 'take' and *qie* 'cut'

SYN1 [SUB *ta* 's/he', OBJ1 *dao* 'knife'] SYN2 [(SUB *ziji* 'self'), OBJ2 *rou* 'meat']

SEM1 [*na* 'take' <Atr *ta* 's/he', THM *dao* 'knife'>] SEM2[*qie* 'cut' <Atr *ta* 's/he',
PNT *rou* 'meat'>]

As represented in (16), the two argument structures in the bi-clausal structure are not connected (shown by the absence of “=”), and the subject argument in the second clause can still be realised in syntax in the form of a reflexive, given its co-referentiality with the subject argument in the first clause.

The second possibility of argument fusion concerns the argument sharing pattern in particular sub-types of core SVC, i.e., the Excessive SVC (Ch. 7) and sub-types of the Resultative SVC (Ch. 6). I take the Excessive SVC to illustrate the argument fusion pattern here. In the Excessive SVC, it is not necessary for the two cores to share their subject arguments. In some expressions of the Excessive SVC, the subject argument of the second core shares the co-referentiality with the object argument of the first core. However, the subject argument of the second core cannot be realised in the argument slot immediately before V2 to maintain its subject status in the second core. Instead, it must be realised at the syntactic level of argument structure by means of obligatory topicalisation to a pre-verbal position (for details on the obligatory topicalisation observed in the Excessive SVC, see Section 2.7.2.4 and Ch. 7; also see Section 2.2 for a brief discussion on topic positions in MC).

MC

Excessive SVC

(17) *Keng ta wa qian le.*

hole s/he dig be.shallow LE

‘The hole has been dig too shallow by him/her.’

(18) Excessive SVC *wa* ‘dig’ and *qian le* ‘be. too shallow’

SYN1 [SUB *ta* ‘they’, OBJ *keng* ‘hole’>] = SYN2 [~~(SUB *keng* ‘hole’)~~]

SEM1 [*wa* ‘dig’<Atr *ta* ‘they’, Udg *keng* ‘hole’>] SEM2 [*qian le* ‘be. too shallow’<Udg *keng* ‘hole’>]

The subject argument of V2 can be overtly expressed in a bi-clausal structure, whereby the same string of verbs can also occur in the Excessive SVC in (17). As shown in (19), the subject argument *keng* ‘hole’ occurs before V2 in the second clause, which shares the same referent with the subject in the first clause (see Section 2.2 for the intransitive clause structure).

(19) bi-clausal structure

Keng ta wa le. Keng qian le.
hole s/he dig PFV hole be.shallow LE
‘The hole, s/he dug. The hole becomes too shallow.’

The argument structure of (19) is represented in (20). The two syntactic argument structures in the bi-clausal structures are not connected to each other (indicated by the absence of “=”), therefore allowing the subject argument of V2 to be overtly expressed in the subject position in the second clause.

(20) bi-clausal structure with *wa* ‘dig’ and *qian le* ‘be. too shallow’

SYN1 [SUB <i>ta</i> ‘they’, OBJ <i>keng</i> ‘hole’]	SYN2 [(SUB <i>keng</i> ‘hole’)]
<hr/>	
SEM1 [<i>wa</i> ‘dig’ <Atr <i>ta</i> ‘they’, Udg <i>keng</i> ‘hole’>]	SEM2 [<i>qian le</i> ‘be. too shallow’ <Udg <i>keng</i> ‘hole’>]

I try to avoid using the term “argument sharing” in this study, as it is too general to capture some of the fine characteristics posed by SVCs. There are two basic reasons for doing so. First of all, if the subject argument is “shared” between the two cores, one may expect that given a wider range of serialising SVO languages, it would be possible to find examples in some of them that have the subject argument only realised at the position immediately before V2 but not before V1 due to the reason “subject argument sharing”. Nevertheless, I am not aware of such a case in the literature so far. On the basis of my observations of MC as discussed in previous paragraphs and some JSM data,

I find that realising the subject argument immediately before V2 can only be fulfilled in a bi-clausal structure. Secondly, the individual verbs in the core SVCs are partly independent from each other in terms of argument structure, while they must occur in the same clause. The linkage of the two cores in a core SVC is fulfilled by the process of argument fusion or coindexation. The arguments that are fused or coindexed must share the reference. As indirect but closely related evidence, it can be seen in the diagnostic of passivising O1 in the core SVCs of MC and JSM that O1 is usually not able to be passivised or even extracted to a pre-V1 position, suggesting that V1 has its own argument domain from the one of V2. For example, in a particular type of Purposive SVC (the VOV type), which was argued to be the genuine SVC in the literature in which *object argument sharing* is adopted as the criterion of diagnosing SVCs cross-linguistically (e.g., Baker (1989) and Collins (1997)). As I discussed in detail in Section 10.2.2, the term *object argument sharing* is too board to account for the facts that the so-called “shared object” in the VOV Purposive SVC can only occur at the position after V1 but not the position after V2, and that this “shared object” cannot be passivised. In fact, according to my study and previous studies of this phenomenon (Chang, 1990, Huang 1989, 1991), there is only coreference between O1 and the null element after V2 in this type of Purposive SVC that imposes a temporal dependence between the actions denoted by the two verbs. A coordinate sentence may also allow some kind of argument sharing in a VO language by placing the "shared object" at the position after the last coordinated verb and forming a SV[VV...]O sequence. However, the temporal dependency between the actions denoted by these coordinated verbs is missing in the coordinate sentence, and the "shared" argument actually does not share any reference with each other. For example, the coordinate sentence *ta mai mai xigua* 's/he bought and sold watermelons' does not entail that it should be the same batch of watermelons that were bought and sold by the subject. For more details, see Section 10.2.2.

In addition to the impossibility of independently expressing the subject of V2 in syntactic argument structure, SVCs can also be distinguished from bi-clausal structures

in other respects, such as number of propositions, ability of allowing passivisation of an object across a clause boundary and temporal structure. Related diagnostics adopted in my study are discussed in Section 2.5.

2.5 Inter-clausal diagnostics

I use the term “inter-clausal diagnostics” to refer to the diagnostics that are operative at the clausal level. They are applied to establish the distinction between bi-clausal structures and SVCs.

The diagnostics discussed in this section are mostly drawn from the literature. Some of them have been applied to distinguish multi-clausal structures from SVCs as general syntactic means, such as the Coordinate Structure Constraint (or CSC) (Ross 1967) and sentential negation (Noonan 1985, Payne 1985b). Others have been adopted in the cross-linguistic literature on SVCs, such as illocutionary force, mood, tense and aspectual specification (e.g., Durie 1997, Aikhenvald and Dixon 2006). These diagnostics may also be seen as correspondents to the operators in the multi-layered structure in RRG (Foley and Van Valin 1984, Van Valin and LaPolla 1997, Van Valin 2005). A few diagnostics are proposed in the RRG framework, such as intonation pattern, modification by manner adverbials and independent negation; see Foley and Olson (1985, 39-40) and Foley and Van Valin (1984, 191-192).

Despite the variety of these existing diagnostics, I will show that not every diagnostic in the existing literature is equally applicable for a cross-linguistic examination of the SVC status as far as MC and JSM data are concerned. I will also show that, in these languages, bi-clausal structures can be distinguished from SVCs in terms of their consistent behaviours with respect to seven diagnostics. They are: independent negation of the second verbal constituent, independent temporal location, passivisation of the object of V2, independent modification by manner adverbials, independent marking of

viewpoint aspect⁸, prosodic structure and the Coordinate Structure Constraint⁹.

2.5.1 Negation

Cross-linguistic observations have shown that SVCs are characterised by sharing only one polarity, which may be marked via a single marking or concord marking, depending on the morpho-syntactic characteristics of a given language (Sebba 1987, 87, Durie 1997, 291, Aikhenvald 2006, 8-10). Component verbs of SVCs cannot have an independent polarity on their own, despite the morphological characteristics in that language (Seuren 2001, 437-438). In the same vein, Crowley (2002) illustrates the impossibility of independent negation on the second nucleus in core verb serialisation with data in Paamese. As shown in (21), while the negative marking *ro...tei* only occurs on V1 in the core SVC, both cores occur in the scope of negation. In contrast, independent negation of V2 is only possible in a bi-clausal structure, as shown in (22), which forms with the same string of verbs *muasi* ‘hit’ and *mate* ‘die’ as (21). See a full discussion in Crowley (2002, 57-60).

Paamese

- (21) kail aromuastei vuas vo:mat.
 kaile a-ro-muasi-tei vuasi voo-mate
 3PL 3PL:REAL-NEG1- hit-NEG2 pig 3SG:IMM.FUT-die
 ‘They did not kill the pig by hitting it.’

- (22) kail amuas vuas ro:matttei.
 kaile a-muasi vuasi Ø-roo-mate-tei
 3PL 3PL:REAL- hit pig 3SG: REAL-NEG1- die-NEG2
 ‘They hit the pig but it did not die.’

⁸ I follow the idea that there is no grammaticalised category for MC to express tense (e.g., Li and Thompson 1989, 13). I also assume that JSM behaves like MC in this regard.

⁹ However, the Coordinate Structure Constraint is not a key diagnostic in my analysis. It is usually used in conjunction with another diagnostic. See the detailed discussion in Section 2.2.7.

(Crowley 2002, 59)

MC, similar to Paamese, allows the same string of verbs of a core SVC (here the Instrumental SVC) to occur in an expression where V2(O2) is independently negated. However, it should be noted that the independent negation of V2(O2), such as (23), results in an unmarked coordinate sentence. It observes the Coordinate Structure Constraint¹⁰ as shown in (24) and (25) (See Section 8.2.1 for details on the independent negation in the Instrumental SVC in both MC and JSM; for the details of applying the Coordinate Structure Constraint, see Section 2.5.7).

MC

(23) *Ta na dao mei qie rou.*
3SG take knife NEG cut meat
'S/he took the knife, (but s/he) didn't cut the meat.'

(24) **Dao, ta na mei qie rou.*
knife 3SG take NEG cut meat
Intended: 'The knife, s/he took, (but s/he) didn't cut the meat.'

(25) **Rou, ta na dao mei qie.*
meat 3SG take knife NEG cut
Intended: 'The meat, s/he took the knife, (but s/he) didn't cut (it).'

In contrast, the structure of the core SVC is intact in the pre-V1 negation. Note that the affirmative expression of the Instrumental SVC does not allow its O1 to be extracted, whereas O2 is extractable (see Sections 8.2.2 and 8.3.1). Examples can also be found in (106) and (107) (Section 2.5.7). This pattern of object extraction is maintained in pre-V1 negation, as shown in (26) and (27).

¹⁰ The *Coordinate Structure Constraint* is defined as "[i]n a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct" (Ross 1967, 161).

MC

(26) **Dao, ta mei na qie rou.*

knife 3SG NEG take cut meat

Intended: 'The knife, s/he did not cut the meat with (it).'

(27) *Rou, ta mei na dao qie.*

meat 3SG NEG take knife cut

'The meat, s/he didn't cut it with a knife.'

Bi-clausal structures, e.g., those involving a coordinate clause, a complement clause, a relative clause or an adverbial clause, behave in the same way with respect to allowing independent negation of component verbs. That is, only in the bi-clausal structures, each component verb can be negated without affecting the polarity of the other verb(s): V1 can be negated while V2 is affirmative, or V2 is negated while V1 is affirmative, or each verb is separately negated at the same time. I have tested these three possibilities of independent negation in the bi-clausal structures. For the sake of representation of the argument, I mainly illustrate the behaviours of the bi-clausal structures in terms of independent pre-V2 negation, as shown in (28)-(31).

MC

(28) *Wo diaoyu, bu¹¹ pa shan.*

I fish NEG climb hill

'I fish, (and/but) I don't climb hills.'

(29) *Lisi wangji zuotian mei anpai zhoumo bu kan dianying.*

Lisi forget yesterday NEG arrange weekend NEG see movie

'Lisi forgot that yesterday he did not arrange (such an event) that he will not see a

¹¹ *Mei* 'not' in MC is generally used to negate the existence of an item, or the completion of an action. *Bu* 'not' when occurring with stative verbs denotes simple negation of existence of state. When it occurs with activity verbs, or phrases that denote a change of status, it usually expresses a sense of unwillingness or refusal. For details, see Li and Thompson (1989, Ch. 12).

movie on weekend.’

- (30) *Wo yudao yi ge ren bu shuo yingyu.*
I come.across one CLF person NEG speak English
‘I came across a person who does not speak English.’

- (31) *Ting zhe yinyue, wo bu kaolu renhe shiqing.*
listen to DUR music I NEG consider any matter
‘Listening to music, I do not think about any matters.’

A purpose subordinate clause can also contain a sentential negation (see Schmidtke-Bode (2009, 129-130)). An example in MC is given in (32). In the expression, the ‘lest’ word *yifang* ‘in order to avoid’ is used as a purpose marker, shown in bold letters (Yin 2011, 411). The sentential negation in the purpose clause is marked by the negative marker *mei* ‘not’.

MC

- (32) *Ta mai le lingshi **yifang** mei chi bao.*
3SG buy PFV snack in order to avoid NEG eat be full
‘S/he bought some snacks in case that s/he is hungry’ (or literally: ‘to prevent the situation of feeling not full’).

Similar arguments that only bi-clausal structures can accept independent negation of V2 can be found throughout the literature. Based on data in Fon, Lefebvre (1991, 43) argues that bi-clausal constructions of coordination and subordination contain separate propositions, therefore allowing each clause to be marked by negation independently. In contrast, the SVC only contains one proposition, which can only receive a single negation.¹² Likewise, as found in Noonan and Bavin (1981, 64-65) and Noonan (1985,

¹² Wording of such a phenomenon in Lefebvre (1991, 43) is somewhat misleading. She argues that corresponding to the domain of proposition, each verb in a distinct clause in coordination and subordination can have a “negative

77), a type of complementation strategy in Lango - “paratactic construction” or “parataxis”, as the authors call it, but see a critique of this treatment in a footnote (no.2) in Dixon (2006, 7) - can be distinguished from SVCs in that the former allows each clause to be negated independently, as opposed to the latter. In addition, see a related argument in Paul (2008, 378) on MC data.

In contrast with the treatment of negation as a clause indicator in the typological studies, negation is considered as one of the diagnostics which establishes the distinction between core and nuclear serialisations in RRG literature. Its application in Barai SVCs is widely cited (Olson 1981, Foley and Van Valin 1984, 192, Foley and Olson 1985, 40). As argued by Olson, in Barai, the negative marker *naebe* is treated as a nuclear layer operator¹³ and modifies the nucleus in a core juncture. Therefore, since the core SVC contains two cores, the nucleus (predicate verb) in either core may be negated, as shown in (33) and (34); while there is only a nuclear predicate in the nuclear SVC, both verbs in this nuclear juncture must fall into the scope of negation with *naebe*, as shown in (35). To independently negate the second nucleus in the newly derived complex nucleus of the nuclear SVC, as shown in (36), is not grammatical (for details, see e.g., Foley and Van Valin 1984, 192).

Barai

- (33) fu naebe fi fase isoe
 he neg sit letter write
 ‘He did not sit down, but did write a letter.’

marker”, whereas the SVC can only have one “negative marker”. Apparently, this argument is made upon Fon data exclusively, as languages behave differently in marking negation, either via a single marking, such as Alablak (see Aikhenvald 2006, 8-9) or concordant marking, such as Akan and Anyi-Sanvi (see Seuren 2001, 437, Aikhenvald 2006, 9).

¹³ Olson himself identifies *naebe* in Barai as a nuclear operator. However, such an argument is not consistent with his further argumentation on the core status of SVCs by applying this negative. In the expressions that Olson uses to specify the status of the core SVCs, this operator seems to function at the core layer rather than the nuclear layer. Precisely speaking, if *naebe* is a nuclear operator in this case, then one would expect it to negate the nucleus only but not the nucleus and the core argument (i.e., the direct object *fase* ‘letter’). However, if his translation is taken seriously, it seems that the scope of negation of *naebe* can be either part of the core or the whole core (i.e., the VO phrase) not the verb itself (i.e., the nucleus predicate).

(34) fu fi fase naebe isoe
he sit letter neg write
'He sat down, but did not write a letter.'

(35) fu fase naebe fi isoe
he letter neg sit write
'He did not sit and write a letter.'

(36) *fu fase fi naebe isoe
he letter sit neg write
(Foley and Olson 1985, 40)

His argument on negation as a means to distinguish sub-types of SVCs is, however, problematic for three reasons. The first and the most important reason is that, as I have shown earlier, the cores can occur either in an SVC or a bi-clausal structure in MC and JSM (also see a related discussion in Section 2.2). When V2(O2) is independently negated from V1(O1), neither object can be extracted from the conjunct, suggesting it is a clausal coordinate structure.

Secondly, it is unconvincing that the negative *naebe* in Barai is a nuclear operator. According to Van Valin and LaPolla (1997, 45), the nuclear operator of negation seems to operate at the lexical level, which causes a lexical item to undergo derivational process, such as *un-* in *unhappy* in English. Yet Olson does not provide any evidence on whether the negative *naebe* is involved in a similar lexical derivation process in Barai (Olson 1981, Foley and Olson 1985). Therefore, *naebe* in the Barai expressions is highly likely to negate a clause (formed on the basis of a single core) rather than a pure nucleus predicate.

Thirdly, SVCs are negated in a different way from bi-clausal structures. SVCs take the sentential negation by a pre-V1 negative marker in MC and JSM. The scope of

sentential negation usually varies from its part to the whole construction (Payne 1985b). SVCs are not exceptional. The interpretation of the negated expression may vary with respect to the scope of negation. A widely cited example is Alamlak (Bruce 1988, 27, Aikhenvald 2006, 9). A similar observation can also be made in MC and also JSM. In negation of the Instrumental SVC for example, the negative marker *mei* is placed before V1. The scope of negation can be over either of the verbal constituents *na dao* ‘take knife’ or *qie rou* ‘cut meat’, as reflected in (37) and (38), or over the whole serialisation, as shown in (39). A continuing clause is added to each expression to clarify the meaning.

MC

(37) *Ta mei na dao qie rou, ta na juzi ju.*

3SG NEG take knife cut meat 3SG take saw saw

‘S/he did not cut meat with the knife, (rather) he sawed the meat with a saw.’

(38) *Ta mei na dao qie rou, ta qie de shi xihongshi.*

3SG NEG take knife cut meat 3SG cut NMLZ COP tomato

‘S/he did not cut the meat with the knife. What he cut (with the knife) was tomato.’

(39) *Ta mei na dao qie rou, ta shenme dou mei zuo.*

3SG NEG take knife cut meat 3SG what all NEG do

‘S/he did not cut the meat with the knife; (rather,) s/he did nothing.’

The same observation that the second core cannot be negated independently from the first core in the SVCs can also be made in JSM. I do not illustrate all the JSM expressions here. Furthermore, it should be noted that, although some JSM expressions of SVC seem to have a negative marker only before V2 in the SVC, these expressions do not form independent negation of the second core in the SVC. An example is given in (40). The negative marker *bo* ‘not’ only occurs before V2 *tam* ‘be wet’.

JSM

- (40) *Hit tei kuna Sionsiong khau bo tam.*
that CLF handkerchief PN cry NEG be.wet
'That handkerchief, Sionsiong cried (on it) but it didn't get wet.'
00:24:02.450 - 00:24:04.720 MT 37

However, V1 in (40) cannot be independently negated. That is, the two verbs in the core SVC cannot be separately negated, as opposed to a bi-clausal structure. Expression (41) was rejected by the JSM consultants of mine (for more details, see Ch. 6).

JSM

(constructed)

- (41) **Hit tei kuna Sionsiong bo khau bo tam*
that CLF handkerchief PN NEG cry NEG be.wet
Intended: 'That handkerchief, Sionsiong did not cry (on it), and it didn't become wet.'

In sum, I have argued that each core in a core SVC cannot be independently negated from the other, as far as Paamese and MC are concerned. The same observation can be made in JSM as well. In contrast, such an independent negation is consistently permitted in bi-clausal structures. It is noteworthy that the same string of verbs can occur either in an SVC or in a bi-clausal structure. It is the latter which allows each clause to be independently negated. Their status as bi-clausal structures can be demonstrated in that they observe the Coordinate Structure Constraint. Therefore, independent negation is regarded as an inter-clausal diagnostic in my research. (In the main body of the thesis, I mainly illustrate expressions of independent pre-V2 negation instead of exemplifying each type of independent negation (i.e., independent pre-V1 negation, independent pre-V2 negation, and separate negation on both V1 and V2). Where necessary, I will make it explicit the (im)possibility of independent negation of each verb in a given expression.)

2.5.2 Passivisation of the object of V2

This diagnostic is novel in the studies of SVCs and has not received application in typological studies of SVCs (e.g., Durie 1997, Aikhenvald and Dixon 2006). In RRG literature, however, Paris (1999) convincingly argues that passivisation can be used as a syntactic test to diagnose the monoclausality in his study of Spanish causative construction. The diagnostic of passivisation of the object of V2 in the present study focuses on the behaviour of the object of V2 in bi-clausal structures and SVCs. Many previous studies have already shown that passivisation in MC must be realised locally (Li 1990a, Ch 6., Chiu 1993, Ch 4., Wu 1999, Shi 2005b, Shi and Hu 2005)¹⁴. The diagnostic tests whether an object can be passivised across a clause boundary. Precisely, given a bi-clausal expression that consists of two verbs, where V2 is transitive and takes an object, it is expected that the object of V2 cannot be passivised across the clause boundary, unlike in SVCs.

Depending on whether an additional experiencer functions as the subject in a passive, passives in MC can be classified into two types: the canonical passive, where the predicative verb retains no object after it in the passive, and the indirect passive¹⁵, where there is still an object that follows the verb and an additional experiencer-NP takes the subject position. The present study adopts the canonical passive as a diagnostic of monoclausality. Since the indirect passive does not concern us in this study, I do not discuss it in full. Interested readers may find a discussion of the indirect passive in MC in Shi (1997) and Huang (1999).

¹⁴ There are also a number of studies that analyse *bei*-passives in MC as a bi-clausal structure; see for example, Ting (1998), Tang (2001), Bisang (2006, 356-359) and Huang et al. (2009, 112-152).

¹⁵ The term *indirect passive* is borrowed from Japanese literature of passives (see Howard and Niyekawa-Howard (1976)). An example of the indirect passive in MC is given in a., where the object argument *yi tiao tui* 'one leg' is retained in the position after V2, and the experiencer *Zhangsan* functions as the subject in the passive.

MC

a. *Zhangsan bei Lisi da duan le yi tiao tui.*
PN PASS PN hit break PFV one CLF leg
'Zhangsan had a leg broken by Lisi.'
(Huang 1999, 461)

Passivisation in MC and JSM involves a process that promotes an argument to the clause initial position¹⁶. The object of V2 is generally passivisable in SVCs, as shown in (42) and (43).¹⁷ The passive marker *bei* or *khih* may introduce the original subject (or agent) to the left of the predicate verb.

MC

- (42) *Cangying bei wo da si le.*
 fly PASS I hit die PFV
 ‘The fly was hit dead by me (or was killed by me).’

JSM

- (43) *Ia khih siang tse phai?*
 chair PASS who sit be.broken
 Literally: ‘The chair was made broken by whom sitting on it?’
 00:02:10.254 - 00:02:11.724 MT 5-8

The object of V2 *rou* ‘meat’ in a core type of SVC, the Instrumental SVC, can also be passivised, as shown in (44). Its JSM equivalent can be found in Ch. 8 Section 8.2.2.

MC

- (44) *Rou bei ta na dao qie le.*
 meat PASS 3SG take knife cut PFV
 ‘The meat was cut by him/her with a knife.’

It should be emphasised that the object argument that takes part in the diagnostic must be the object of V2 (cf. Huang (1992)). Note that O1 can be passivised within the first clause, which however may give the false impression that O1 can be passivised across

¹⁶ Note that passivisation keeps the promoted object argument within the clause. By “clause initial position”, I only refer to the linear placement of the promoted object argument in the passive construction.

¹⁷ However, see also Sections 2.4, 2.6.3-4 and 2.7.2.1 for an argument that in the nuclear SVCs, the realised object(s) belong to the complex nucleus as a whole rather than any component verb.

clauses. For example, expression (46) forms on the basis of the asyndetic coordinate (45). In the interpretation a. of (46), the object *laoshu* ‘mouse’ is passivised within the first clause, and the second clause in (46) is still in active voice. The resulting expression therefore forces a totally different interpretation from the original expression. That is, in (46) (shown in the interpretation a.), it is the mouse that gnaws the bones, as opposed to the scenario in (45), which expresses that it is the cat that does the action.

MC

(45) *Mao zhui laoshu, ken gutou.*
 cat chase mouse gnaw bone

‘The cat chases mice and gnaws bones.’

(46) *Laoshu bei mao zhui, ken gutou.*
 mouse PASS cat chase gnaw bone

a. ‘The mouse is chased by a cat (and) gnaws bone.’

*b. Intended: ‘*The mouse is chased and is gnawed bones by a cat.’

In contrast to the SVCs, the bi-clausal structures consistently do not allow the object of V2 to be passivised. A coordinate sentence, such as (47), may allow the object of V2 to be topicalised; see (104). However, this object cannot be passivised, as shown in example (48). Note that the occurrence of the aspectual marker *le* in each clause also correlates with the bi-clausal structures (see Section 2.5.4 for a discussion).

MC

(47) *Wo kan le na xie shu, xie le lunwen.*
 I read PFV that some book write PFV paper

‘I read those books, and wrote the paper.’

(48) **Lunwen bei wo kan (le) na xie shu xie (le) e.*
 paper PASS I read PFV that some book write PFV e

Intended: ‘The papers were written by me reading those books.’

In (49), the NP *na ge panzi* ‘that dish’ is the object of the complement clause *za sui le na ge panzi* ‘smash that dish in pieces’¹⁸. This object cannot be passivised across the clause boundary, as shown in (50).

MC

(49) *Lisi fouden (ta) za sui le na ge panzi.*
PN deny 3SG smash be.in.pieces PFV that CLF dish
‘Lisi denied that s/he smashed that dish into pieces.’

(50) **Na ge panzi bei Lisi fouden (ta) za sui le.*
that CLF dish PASS PN deny 3SG smash be.in.pieces PFV
Intended: ‘That dish was denied by Lisi to smash it into pieces.’

In (51), a relative clause modifies its head *yi ge zei* ‘a thief’. The object of V2 *hen duo qian* ‘money’ exists in the relative clause. Consequently, it cannot be passivised across the clause boundary, as shown in (52).

MC

(51) *Ta zhua le yi ge zei tou le hen duo qian.*
3SG catch PFV one CLF thief steal PFV very much money
‘S/he caught a thief, who had stolen much money.’

(52) **Hen duo qian bei ta zhua le yi ge zei*
very much money PASS 3SG catch PFV one CLF thief

¹⁸ In the complement clause, the verbs *za sui* ‘smash break’ form a nuclear SVC, which functions on a par with a single verb (i.e., V2 in this case). Consequently, the object argument *beizi* ‘mug’ can be considered as the object of V2 in the sentence.

tou le e
steal PFV e

Intended: 'So much money was stolen by him catching a thief.'

The bi-clausal expression (53) contains two clauses that are adjoined by the subordinate marker *de* in a resultative function. The object of V2, *beizi* 'mug', cannot be passivised across the clause boundary, as shown in (54).

MC

(53) *Lisi ku de Zhangsan za le beizi.*

Lisi cry SUBORD Zhangsan smash PFV mug

'Lisi cried so much that Zhangsan smashed the mug.'

(54) **Beizi bei Lisi ku de Zhangsan za le.*

mug PASS Lisi cry SUBORD Zhangsan smash PFV

Intended: 'The mug was smashed by Zhangsan (getting annoyed by) Lisi crying so much.'

Example (55) contains two clauses that encode simultaneous actions *kan dianshi* 'watch TV' and *xi yifu* 'wash clothes'. The first clause functions as an adverbial that modifies the second clause; the simultaneity of the two actions is indicated by the durative marker *zhe*. The object of V2, *yifu* 'clothes', is not passivisable, as shown in (56). Note that the order between the adverbial clause and the main clause cannot be reversed in (55).

MC

(55) *Ayi kan zhe dianshi xi yifu.*

aunt watch DUR TV wash clothes

'Watching TV, the aunt washed the clothes.'

- (56) **Yifu bei ayi kan zhe dianshi xi (le).*
 clothes PASS aunt watch DUR TV wash PFV
 Intended: ‘*The clothes were washed by aunt watching TV.’

There might be a counterexample to this diagnostic that the second object in the Caused-Motion SVC is not passivisable. However, this “O2” is a locative NP. It therefore is not considered a direct object in the construction. With regard to a syntactic test of argumenthood (the interpretation of minimal headless relative clause), this locative NP can hardly be considered as an argument of the intransitive directional verb in the Cause-Motion SVC. Consequently, it is not a counterexample to the inter-clausal diagnostic of passivisation of object of V2. For more details, see Section 9.2.2.

One should also notice that passivisation in MC is usually used to convey adversative meaning (Huang 1999), thus is not a purely syntactic phenomenon. In addition, not every transitive verb may have a passive counterpart. For example, there is no passive for the transitive verb *xihuan* ‘like’; and one cannot say **wo bei xihuan le* ‘I am/was liked’. Moreover, some studies suggest that the object of V2 in a seemingly bi-clausal structure may also undergo passivisation, as in (57).

MC

- (57) *Zhangsan bei Lisi pai jingcha zhua-zou le.*
 PN PASS PN send police arrest PFV
 ‘Zhangsan was ‘sent-police-to-arrest’ by Lisi.’
 (Huang 1999, 440)

Nevertheless, it is yet unclear whether the structure in (57) is a bi-clausal one. In the mono-clausal analysis, V1 *pai* ‘send’ can be analysed as a causative verb that requires another argument-taking grammatical unit (here *zhua-zou* ‘arrest’) to form a grammatical structure. This analysis will consequently support my point that passivisation of the object of V2 can serve as an inter-clausal diagnostic. Yet, given the

two-way analysis of a particular construction as shown in (57), more data are definitely required to improve the generalisation.

In summary, passivisation of the object of V2 is still well-motivated as an inter-clausal diagnostic to distinguish bi-clausal structures from SVCs based on my observation of data present in this thesis. We can see that the bi-clausal structures behave consistently in disallowing the object of V2 to be passivised across the clause boundary. However, it should also be noted that this diagnostic has its own limits, in that it does not apply to the SVCs that only involve intransitive verbs or have no object argument following V2. Moreover, purpose sentences - in which the realisation of the purpose event is hypothetical - do not necessarily encode affectedness of the object of V2 in the event, preventing it to be passivised (see Section 10.2.2 for more details).

2.5.3 Independent temporal location

This section discusses the specification of temporal location in SVCs. Closely related to the temporal reference in SVCs are two grammatical categories: tense and temporal adverbials. Both of them are regarded as the most obvious means of marking temporal reference in a given expression. In this section, I will show that specification of these grammatical categories correlates with syntactic and semantic characteristics of the construction where they are marked.

2.5.3.1 Macro-Event Property

A number of studies make the claim that SVCs express “a single event” or “a recognisable event type” (e.g., Sebba 1987, 112, Durie 1997, 322, Aikhenvald 2006, 1). The defining notion of single eventhood has been intuitively appealing but difficult to apply to cross-linguistic data (see a discussion about such a difficulty in Schultze-Berndt (2000, 36-37)). In order to define eventhood in a cross-linguistic context, Bohnemeyer et al. (2007) propose the Macro-Event Property (MEP in short). The MEP is defined as:

“...an expression has the MEP iff any time-positional operator denoted by a time-positional adverbial, temporal clause, or tense that ‘locates’ a subevent entailed by the expression in time also locates all other subevents in time.”

(Bohnmeyer et al. 2007, 505)

In other words, the MEP requires that the temporal information in a sub-event of the macro-event should be accessible to other sub-events in the macro-event which is denoted by the construction; the MEP collapses if a sub-event does not share the temporal reference with others. A more restricted definition of the MEP can be found in Bohnmeyer and Van Valin (2009). Compare the three sentences in (58).

- (58) a. Sally broke the vase instantly/a moment later.
b. Sally knocked over the vase and it broke instantly/a moment later.
c. Sally knocked over the vase instantly/a moment later and it broke.

(Bohnmeyer et al. 2007, 503)

Only sentence a. displays the MEP. In a., the adverbial, *instantly* or *a moment later*, has scope over the sub-event of Sally causing action and the sub-event of the vase breaking. The other two sentences, b. and c., do not have the MEP, as the adverbials in b. specify the interval between the two sub-events, and the adverbials in c. specify the interval before the first sub-event happened.

It is argued that the definition of eventhood by the MEP correlates with the defining characteristics of SVCs¹⁹ (Jarkey 2015). Most importantly, as the MEP focuses on the temporal location of an event, two categories concerning temporal reference of an event are closely related: tense and temporal adverbials. The notion of tense receives a

¹⁹ However, as Bisang (2015, 805, forthcoming-b) points out, definition of the single eventhood usually relies on the cultural factors, which tend to vary across language communities. Using such a definition to capture the characteristics of SVCs is more likely to be problematic than useful, and it tends to lead one to establish an arbitrary distinction between properties and parameters of SVCs cross-linguistically. Moreover, whether the MEP can be adopted to capture the culturally determined concept of single eventhood is still open for further research. However, as I will show in this thesis, the MEP can be used as a means to diagnose the monoclausality, a syntactic property.

significant role in justifying the temporal property in SVCs (Bisang 2009, 805-806). Specification of tense is usually mentioned in cross-linguistic studies on SVCs: there is only one value of tense in an SVC (Sebba 1987, 87, Durie 1997, 291, Aikhenvald 2006, 1). However, for languages that do not express tense via a grammaticalised means, such as MC and JSM, temporal adverbials play an important role in the discourse for the language users to locate a particular event, in addition to Aktionsart and viewpoint aspect, amongst other factors (see e.g., Smith and Erbaugh 2001, Lin 2003, Smith and Erbaugh 2005, Lin 2006). In the following, I will discuss the marking of tense briefly and focus on the expression of temporal adverbials.

2.5.3.2 Tense

Tense is treated as a clausal operator in RRG²⁰ (see e.g. Van Valin 1997, 40, 47). Some languages may express tense via grammaticalised means, but some may not. MC and JSM are languages of the latter type, which do not encode the notion of tense by a grammaticalised category (e.g., Li and Thompson 1989, 13).

In some languages, whether the tense marking occurs on each verb demarcates SVCs from coordinate sentences. In Ewe, the SVC in (59) is marked by the future tense only once, whereas each conjunct in a coordinate structure must be marked, as shown in (60) (Collins 1997, 463).

Ewe

(59) me a fo kadεgbε gba
 I FUT hit lamp break
 ‘I will hit the lamp and break it.’

(60) me a fo kadεgbε *(a) gba (yεme) tsimini
 I FUT hit lamp FUT break its glass

²⁰ Foley and Van Valin (1984, 209) use different wording for tense: “...and tense is, in fact, a peripheral-layer operator”.

(Collins 1997, 463)

Collins (1997) argues that this representation of tense on verbs is due to the fact that the SVCs can have only one IP, while the coordinate sentences may have two. However, explicit marking of tense on component verbs may not follow the same pattern in different languages. There are SVCs that only require a single marking of tense just like Ewe, while the existing literature shows that concordant marking of tense can also be found in SVCs in some languages (Durie 1997, 291, Aikhenvald 2006, 42-43), such as Paamese (Crowley 2002, 55), Baule (Creissels 2000, 240, cited in Aikhenvald 2006, 2), and Koṅḁa (Steever 1988, 71-73, cited in Aikhenvald 2006, 41). Languages may also choose optional marking of tense on each verb in an SVC, such as Saramaccan (Byrne 1990, 152, cited in Aikhenvald 2006, 42). Given the various patterns of tense marking in SVCs, perhaps tense marking should be considered as a language-specific criterion of SVCs.

2.5.3.3 Temporal Adverbial Modification

Information by temporal adverbial modification is arguably encoded at the clausal level (or within the periphery). Sub-events that do not share the MEP are construed in different clauses respectively rather than in an SVC (Bohnenmeyer and Van Valin 2009, Jarkey 2015). That is, not sharing the periphery of a clause straightforwardly indicates that the verbal constituents in question are not in the same clause. This is observed in both MC and JSM. This section will focus on the MC data. Note that this diagnostic may not be applicable to the sentences containing a simultaneous adverbial subordinate clause, since such a bi-clausal structure requires the two involved actions to share an overlapping temporal structure. However, the other bi-clausal expressions do allow different temporal adverbials to modify each clause. For example,

MC

(61) *Wo zuotian diao yu, jintian pa shan.*
I yesterday fish fish today climb hill

‘I fished yesterday. (And) I climbed hills today.’

- (62) *Lisi jintian founen Zhangsan zuotian fan le cuo.*
Lisi today deny Zhangsan yesterday make PFV mistake
‘Today Lisi denied that Zhangsan made a mistake yesterday.’

- (63) *Lisi zuotian ku de jintian wang le qianbao.*
Lisi yesterday cry SUBORD today forget PFV wallet
‘Lisi cried so hard yesterday that he forgot the wallet today.’

- (64) *Wo jintian mai mianfen yibian mingtian bao jiaozi.*
I today buy flour so.that tomorrow wrap dumpling
‘I bought some flour today so that I (can) wrap dumplings tomorrow.’

Notably, the same string of verbs that occurs in an SVC may seem to allow modification by different temporal adverbials. However, the corresponding expression is in fact a bi-clausal structure. The verbal constituents that occur in the Instrumental SVC can also occur in example (65), each of which, however, has independent temporal information. Its bi-clausal structure is revealed in (66), as the object of V2 cannot be passivised across the clause boundary, as opposed to SVCs (see Section 2.5.2 for more details of the inter-clausal diagnostic of passivisation of the object of V2).

MC

- (65) *Ta zuotian na dao jintian qie rou*
3SG yesterday take knife today cut meat
‘S/he took the knife yesterday and cut the meat today.’

- (66) **Rou bei ta zuotian na dao jintian qie (le).*
meat PASS 3SG yesterday take knife today cut PFV
Intended: ‘??The meat was cut by him/her today (by) taking the knife yesterday.’

The object arguments in (65) cannot be extracted either, observing the Coordinate Structure Constraint. I do not illustrate it here, but see Section 8.2.3 for a full discussion in this respect.

In conclusion, bi-clausal structures allow each clause to be modified by a distinct temporal adverbial, as opposed to SVCs. Therefore, independent modification by temporal adverbial should be considered as an inter-clausal diagnostic.

2.5.4 Independent marking of viewpoint aspect

This section discusses application of viewpoint aspect²¹ in the identification of SVCs. In cross-linguistic studies, SVCs are often characterised as sharing only one aspect value (Sebba 1987, 87, Durie 1997, 291, Aikhenvald 2006, 1). Verbal constituent(s) cannot express aspect independently from each other in the SVC. Aspect in the SVC can be expressed once, as in Khwe (Kilian-Hatz 2006, 116-117), or by concordant marking, as in Goemai (Hellwig 2006, 95).

In RRG, aspectual markers are treated as nuclear operators in the layered structure. It is argued that they operate on the internal temporal structure of the verbal stem without taking the core arguments into account (Foley and Van Valin 1984, 209-212, Van Valin and LaPolla 1997, 40, 45, Van Valin 2005, 202-204).

It should be noted that the label of the nuclear operator “aspect” in RRG does not cover a homogeneous category. Not only phasal verbs, such as *furi* ‘finish’ in Barai, are subsumed under the label “aspect”: morphemes that express viewpoint aspect are also included in this category. As shown in (67), the progressive marker *tū* in Fijian is treated

²¹ In this study I follow the opinion that there is a distinction between the viewpoint aspect and the lexical aspect (or Aktionsart) in that the former is usually manifested in morpho-syntax and is associated with a perfective/imperfective dichotomy, while the latter correlates with the inherent temporal characteristics of situations, such as durativity, dynamicity and telicity. Nevertheless, a thorough investigation of aspect should be taken on multiple levels, such as lexical, sentential and discursal levels, and takes the interaction between different levels into account. See Sasse (2002) for a detailed discussion of different approaches (i.e., unidimensional and bidimensional approaches) to the category of *aspect* and the multiple issues that the cross-linguistic investigations of aspectuality have involved.

as a nuclear operator on a par with the phasal verb *tū* ‘stand’.

Fijian

(67) *E viri- tū-ra tū na duru na tūraga.*
CM²² put-stand-TR²³ PROG ART²⁴ post ART chief
‘The chief is erecting the post.’

(Parke 1981, Foley and Van Valin 1984, 211)

The same problem of mixing the notions of lexical aspect and viewpoint aspect can also be found in Aikhenvald and Dixon (2006). For example, while the verb *kaba* ‘finish’ in Kristang - which indeed seems to be a phasal verb - is argued to mark the completive aspect (Baxter 1988, 213, Aikhenvald 2006, 23), in a discussion of aspectual marking in Cantonese, marking of viewpoint aspect, such as experiential aspect, progressive aspect and continuous aspect, is subsumed in the section of “Aspect marking” as well (Aikhenvald 2006, 28-29, Matthews 2006, 78-79).

This lack of discrimination of lexical aspect and viewpoint aspect in RRG’s broad coverage of the concepts of “aspect” has received an explicit critique from Kailuweit (2011, 83-84). Lexical aspect refers to the internal temporal structure of a verbal constituent, whereas viewpoint aspect is construed in the syntax and may interact with the lexical aspect (Dowty 1979, Smith 1997, Arche 2014) (see also a review in Section 4.2 in Levin and Rappaport Hovav (2005)). The necessity to distinguish the two notions has been addressed in a number of studies (Verkuyl 1999, Bertinetto 2000, Bohnemeyer and Swift 2004, Borik and Reinhart 2004). Therefore, I follow Kailuweit’s argument and distinguish the two aspectual components in the sense of Smith (1997) in my diagnostics.

In the following, I will show that viewpoint aspectual marking happens at the clausal

²² CM stands for “clause marker” in Foley and Van Valin (1984).

²³ TR stands for “transitive” in Foley and Van Valin (1984).

²⁴ ART stands for “article” in Foley and Van Valin (1984).

level as far as SVCs and bi-clausal structures are considered. Only bi-clausal structures allow verbs to be marked by different viewpoint aspectual markers. SVCs in MC and JSM allow marking of the viewpoint aspect only once.

Bi-clausal structures allow different clauses to take different aspectual marking. This can be seen particularly in the simultaneous subordinate structure such as (68), where V1 is overtly marked by the durative marker *zhe* and V2 takes the perfective marker *le*.

MC

- (68) *Ayi kan zhe dianshi xi le yifu.*
 aunt watch DUR TV wash PFV clothes
 ‘Watching TV, aunt finished washing the clothes.’

Marking component verbs with different aspectual markers is not acceptable in SVCs in MC, as shown for the Cause-Effect type of nuclear SVC in (69). Core SVCs, such as the Excessive, the Caused-Motion, and the Purposive SVCs, do not accept such modification either, as illustrated in (70)-(72). Note that these ungrammatical expressions cannot be interpreted as bi-clausal structures. .

MC

- (69) **Ta ca zhe ganjing le chuanghu.* (Cause-effect)
 3SG wipe DUR be.clean PFV window
 Intended: ‘S/he was wiping (something) and cleaned the window.’

- (70) **Gou ta wa zhe qian le.* (Excessive)
 dog 3SG dig DUR be.shallow LE²⁵
 Intended: ‘The ditch, s/he was digging, and (it) became shallower.’

²⁵ I gloss it as “LE” because it is a post-verbal *le*, which functions differently from the perfective aspect marker *le* in MC. For details, see Ch.7 (the Excessive SVC).

(71) **Ta mai zhe hua hui le sushe.* (Caused-Motion)
 3SG buy DUR flower return PFV dorm
 Intended: ‘S/he was buying flowers and returned to the dorm.’

(72) **Ta wa zhe dong zhua le tuzi.* (Purposive)
 3SG dig DUR hole catch PFV rabbit
 Intended: ‘S/he was digging a hole, and caught a rabbit.’

The above expressions are not acceptable, and neither do they allow the object of V2 to be passivised. Expression (73) attempts to passivise the object argument *tuzi* ‘rabbit’ in (72), but it fails. A similar behaviour can also be observed for (69)-(71). I do not illustrate it here.

MC

(73) **Tuzi bei ta wa zhe dong zhua le.*
 rabbit PASS 3SG dig DUR hole catch PFV
 Intended: ‘The rabbit was caught by him/her digging the hole.’

At first glance, the Instrumental SVC may allow its component verbs to be specified with different aspects, as argued in Hwang (2008, 134). However, as (74) shows, the interpretation of O1 *dao* ‘knife’ as the instrument in performing the main action of cutting meat is absent (cf. Ch. 8 for the instrumental interpretation of O1 in the Instrumental SVC). Insertion of the expression *yong chizi* ‘use ruler’ in this expression is grammatical, which introduces the only instrument in the cutting event. As can also be seen in (75), passiving *rou* ‘meat’ is prohibited, signalling the existence of a clause boundary between the adverbial clause and the Instrumental SVC (see Section 2.5.2).

MC

(74) *Ta na zhe dao (yong chizi) qie le rou.*
 3SG take DUR knife use ruler cut PFV meat

‘Taking the knife, s/he cut the meat (with a ruler).’

(75) **Rou bei ta na zhe dao yong chizi qie le.*

meat PASS 3SG take DUR knife use ruler cut PFV

Intended: ‘??The meat was cut with a ruler by him/her taking the knife.’

A bi-clausal expression in MC may also specify the same viewpoint aspect on each component verb with the perfective aspect marker *le*. The bi-clausal structure of (76) is demonstrated by the fact that it does not allow its object of V2 to be passivised, as illustrated in (77). This behaviour is in contrast with the behaviour of O2 in the Instrumental SVC, as shown in (44).

MC

(76) *Ta na le dao, qie le rou.*

3SG take PFV knife cut PFV meat

‘S/he took the knife, cut the meat.’

(77) **Rou bei ta na le dao qie le.*

meat PASS 3SG take PFV knife cut PFV

Intended: ‘The meat was cut by him/her after taking the knife.’

In sum, my findings show that only bi-clausal structures allow distinct clauses to be marked by distinct (or identical) viewpoint aspects. In SVCs, there can be only one viewpoint aspect marker. Therefore, marking of viewpoint aspect should be considered as an inter-clausal diagnostic.

2.5.5 Independent modification by manner adverbial

In this section, I discuss the independent application of modification by manner

adverbials as an inter-clausal diagnostic. I will show that to modify the second core in an expression with a manner adverbial separately from its first core is only acceptable in a bi-clausal structure. The status of this bi-clausal structure can be shown as it observes the Coordinate Structure Constraint based on my observation of MC and JSM data.²⁶

There have been very few typological studies on whether SVCs can be distinguished from other multi-verb constructions by independent modification by manner adverbials, or whether sub-classes of SVCs may accept modifications by distinct manner adverbials on their verbal parts (cf. Durie 1997, Aikhenvald 2006)²⁷.

In the RRG literature, modification by a manner adverbial is treated as a means of differentiating syntactic sub-types of SVC (Olson 1981, Foley and Van Valin 1984, 191-192, Foley and Olson 1985, 39). For example, in Barai, the adverb *isema* ‘wrongly’ seems to be able to occur with either core of the core SVC, forming a narrow scope of modification, as shown in (78) and (79). In contrast, in a nuclear SVC, the same adverb must modify the complex nucleus by taking both verbs into its scope, as shown in (80), as opposed to (81) (Olson 1981, Foley and Van Valin 1984, 191-192, Foley and Olson 1985, 39).

Barai

- (78) fu isema fi fase isoe
he wrongly sit letter write
‘He sat wrongly and wrote a letter.’

²⁶ I am aware that different types of adverb correspond with different layers in the layered structure in the RRG framework. For example, the manner adverbs, such as *quickly* and *slowly* (called as the pace adverbs in Van Valin 2005) are argued to modify the core (see Van Valin 2005, 19-21). Since a core can be part of a complex monoclausal structure or simply constitutes a single clause, saying that manner adverbs have the scope only over a core should not be taken as an argument that a given expression that is modified by a manner adverb must be a simple core within a clause. In other words, whether what is modified by a manner adverb is a clause that consists of a single core or a simple core in a complex monoclausal construction that consists of multiple cores should be diagnosed with semantic and/or syntactic tests.

²⁷ Clear-Kemp (2015, 123) states that modification by manner adverbs can be adopted to establish the difference between a construction that has the MEP and a construction that does not. However, in her analysis of Koro SVCs, there are more arguments based on semantic interpretation of Koro expressions and conceptualisation of a given situation than the syntactic arguments when the mechanism of using modification by manner adverbs to diagnose the status of SVCs is explained (e.g., Clear-Kemp (2015, 180)).

(79) fu fi fase isema isoe
 he sit letter wrongly write
 ‘He sat down and wrote the letter wrongly.’

(80) fu fase isema fi isoe
 he letter wrongly sit write
 ‘He wrongly sat writing a letter.’

(81) *fu fase fi isema isoe
 he letter sit wrongly write

(Olson 1981, Foley and Van Valin 1984, 191-192, Foley and Olson 1985, 39)

However, the argument on modification by manner adverbial on the basis of Barai data seems to be problematic as far as MC and JSM data are concerned. In this section, I base my examination primarily on MC data to show that independent modification by manner adverbials happens in distinct clauses and it should be treated as an inter-clausal diagnostic. The same observation can be made in JSM as well. I do not repeat JSM expressions in this section.

Modification by an adverb in a nuclear SVC can only be conducted by a pre-V1 adverb which takes scope over the whole SVC, as shown in (82). Intended scope only over V1 is not acceptable. A continuing clause specifying a distinct manner of V2 is awkward, as shown in (83). The manner adverb *xunsude* ‘quickly’ can not occur between the nuclear serial verbs to modify V2 only, as shown in (84).

MC

(82) *Ta xunsude da si le cangying.*
 3SG quickly hit die PFV fly
 ‘S/he quickly killed the fly.’

(83) (82), * (*buguo cangying manmande si le*).

but fly slowly die PFV

Intended: 'S/he quickly killed the fly, but the fly died slowly.'

(84) **Ta da xunsude si le cangying*.

3SG hit quickly die PFV fly

Intended: '??S/he killed the fly and it died quickly.'

Law (1996, 216) argues that the scope of the adverb *kuaiquaide* 'quickly' in (85) can cover only V2O2 *qie rou* 'cut meat' in the Instrumental SVC (a core SVC), excluding V1O1 *na dao* 'take knife'.

MC

(85) *Ta na dao kuaiquaide qie le rou*.

3SG take knife quickly cut PFV meat

'He quickly cut the meat, with the knife.'

(Law 1996, 216)

From the above expressions, the diagnostic of independent modification by manner adverbial may at first glance seem to be an intra-clausal one. However, as I will show later, only bi-clausal structures consistently allow their V2O2 to be independently modified from V1O1 by a distinct manner adverb. Contrastively, in an SVC, component verbs must be in the same scope of modification by a manner adverb.

Semantically, if only the second action is modified by an adverb excluding the preceding action, as argued in Law (1996, 216), the expression, intuitively, includes two separate actions. Expression (85) is in fact ambiguous in meaning and structure. When V1O1 denotes a concrete action of carrying or fetching the knife which does not necessarily constitute a part in the cutting event, the expression denotes two distinct actions rather than an event denoted by an Instrumental SVC. That is, two independent

actions are indicated in the expression.

Furthermore, there is syntactic evidence for the identification of two distinct actions. In this expression, neither object can be extracted, as shown in (86)²⁸ and (87)a, thus violating Coordinate Structure Constraint (see Section 2.5.7). Note that (87) is only grammatical when it is the Instrumental SVC; see the interpretation b. in (87). Similarly, grammatical passivisation of the object of V2 can only form with the instrumental interpretation; it fails if a bi-clausal structure is involved; see the two interpretations in (88). Also note that such an expression indicates that while the adverbial occurs only before V2O2, its scope of modification still takes the whole SVC rather than just V2O2.²⁹

MC

(86) **Dao, ta na kuaikuaide qie le rou.*
knife 3SG take quickly cut PFV meat

Intended: ‘The knife, s/he took (it) quickly, (and s/he) cut the meat.’

(87) *Rou, ta na dao kuaikuaide qie le.*
meat 3SG take knife quickly cut PFV

*a. Intended: ‘The meat, s/he took/takes knife, (and) quickly cut (it).’ (bi-clausal)

b. ‘The meat, s/he cut it with the knife quickly.’ (Instrumental SVC)

(88) *Rou bei ta na dao kuaikuaide qie le.*
meat PASS 3SG take knife quickly cut PFV

*a. Intended: ‘??The meat was cut quickly by him/her taking a knife.’

(bi-clausal)

b. ‘The meat was cut by him/her with a knife quickly.’ (Instrumental SVC)

²⁸ But note that O1 in most sub-types of non-contiguous core SVC in MC and JSM is not extractable. See section 2.5.7.

²⁹ Unlike in English, in MC, the manner adverb generally occurs before the predicate that it modifies, rather than after it. Therefore, *kuaikuaide na dao* ‘lit. quickly take knife’ is acceptable, but **na dao kuaikuaide* ‘lit take knife’ is not.

Moreover, a narrow scope of modification, as argued by Law, should be coherent with the claim that each core in the Instrumental SVC can be modified by a distinct manner adverbial. However, this type of modification in fact involves a bi-clausal structure. I test this possibility with different adverbs, *kuaiquaide* ‘quickly’ and *manmande* ‘slowly’, with the verbal constituents in the Instrumental SVC. A resulting expression is given in (89). In the expression, the VO-combinations that can occur in the Instrumental SVC occur in a bi-clausal structure, in which each clause is modified by a distinct manner adverbial.

MC

- (89) *Ta kuaiquaide na dao manmande qie rou.*
 3SG quickly take knife slowly cut meat
 ‘S/he took the knife quickly and cut the meat slowly (with the knife).’

Despite the grammaticality of (89), it can be seen in (90) and (91) that neither the object *dao* ‘knife’ nor the object *rou* ‘meat’, can be extracted. Passivisation of the object of V2 is not grammatical either, as illustrated in (92). Therefore, (89) is not an SVC, but a clausal coordination.

MC

- (90) **Dao, ta kuaiquaide na manmande qie rou.*³⁰
 knife 3SG quickly take slowly cut meat
 Intended: ‘The knife, s/he quickly takes/took(, and) cut meat (with it) slowly.’

- (91) **Rou, ta kuaiquaide na dao manmande qie.*

³⁰ Extracting O1 only out of the first clause does not result in a grammatical clause (with a topicalised O1). In order to have a grammatical first clause with a topicalised O1, the perfective aspectual marker *le* must be used after the main verb (i.e., V1). Such an expression is provided below:

MC

- (1) *Dao ta kuaiquaide na le, manmande qie rou.*
 knife s/he quickly take PFV slowly cut meat
 ‘The knife, s/he took it quickly. S/he cut the meat slowly.’

meat 3SG quickly take knife slowly cut

Intended: ‘The meat, s/he quickly takes/took the knife(, and) slowly cut (it).’

(92) **Rou bei ta kuaikuaide na dao manmande qie.*

meat PASS 3SG quickly take knife slowly cut

Intended: ‘??The meat was slowly cut by him/her taking a knife quickly.’

Another piece of evidence comes from the diagnostic of cancellation. If a narrow scope of adverbial modification is applicable in an SVC, it is expected that the semantic effect from the same adverbial modification cannot be extended to the verbal constituent that does not immediately follow the adverbial. However, a narrow scope of modification by a pre-V1 adverb *kuaikuaide* ‘quickly’ cannot be successful in an SVC, as shown in (93). A continuing clause attempting to reject the modification by *kuaikuaide* ‘quickly’ of V2O2 in the Instrumental SVC is awkward.

MC

(93) *Ta kuaikuaide na dao qie le rou,*

3SG quickly take knife cut PFV meat

(**danshi ta qie rou qie de hen man*).

but 3SG cut meat cut SUBORD very slowly

Intended: ‘??S/he quickly cut the meat with the knife, but s/he cut the meat slowly.’

In contrast, other bi-clausal structures, such as those involving a complement clause, a relative clause or an adverbial subordinate clause, all accept independent adverbial modification of each verbal constituent, exemplified in (94)-(96).

MC

(94) *Lisi xunsude founen Zhangsan manmande fan le cuo.*

Lisi quickly deny Zhangsan slowly make PFV mistake

‘Lisi denied quickly that Zhangsan made a mistake slowly.’

(95) *Wo xunsude cai le yi duo hua gang manmande kai.*
I quickly pick PFV one CLF flower just slowly blossom
‘I picked a flower quickly, which is just blossoming slowly.’

(96) *Kuaikuaide pao zhe, wo manmande wang le fannao.*
quickly run DUR I slowly forget PFV worry
‘Running quickly, I forgot the worries slowly.’

In sum, I have argued that independent modification by different manner adverbials can only be achieved in a bi-clausal structure. An SVC does not allow narrow scope of modification by different manner adverbials. That is, in an SVC, the manner adverbial that modifies one component verb should modify other component verbs at the same time. Therefore, I consider such a diagnostic as operative at the inter-clausal level.

2.5.6 Prosodic structure

Prosodic structure is argued to be another defining feature of SVCs, as an SVC should have the same intonation pattern as a monoclausal structure (Aikhenvald 2006, 7-8). In the following, I will show that, based on observations in MC and JSM, prosodic structure is regarded as an inter-clausal diagnostic. Specifically, I argue that this diagnostic should be applied to MC and JSM expressions where there are two adjacent verbs in a string and the SVC status is not clear given the superficial contiguity. (See a more detailed discussion on the prosodic boundary upon the occurrence of an NP argument in STM in Section 3.3.1.4.3.)

In MC, the most obvious reflection of the prosodic structure is tone sandhi. To illustrate, I take the tone sandhi between two 214 tones in MC as an example. The original 214 tone on the first morpheme changes to the 35 tone if it is followed by a morpheme with

the same 214 tone in a constituent. Example (97) contains a Cause-Effect SVC. V1 *da* ‘hit’ on its own is pronounced with a 214 tone. However, it changes to the 35 tone before V2 *pao* ‘run’, the original tone of which is also 214.

MC

(97) *Ta da²¹⁴⁻³⁵ pao²¹⁴ le gou.*

3SG hit run PFV dog

‘S/He beat the dog off.’

The pattern of tone sandhi is not maintained if there is a clause boundary between the two verbs. For example, (98) consists of two clauses containing the same verbs as in (97), but a prosodic break (indicated by a comma) exists after V1 *da* ‘hit’, which prevents the tone sandhi from happening, despite the fact that it is followed by V2 *pao* ‘run’ with the same 214 tone.

MC

(98) *Shouji ta yizhi da²¹⁴, pao²¹⁴ le yi zhi tuzi.*

cell phone 3SG continuously hit run PFV one CLF rabbit

‘The cell phone, s/he kept calling with it, and (as a result of this carelessness) a rabbit escaped.’

A pair of examples in JSM also shows the applicability of this diagnostic, albeit in a restricted way. It can be seen that in a Cause-Effect SVC, such as (99), V1 *lo* ‘stew’ changes its tone from 55 to 24 before V2. However, once they are separated by a clause boundary, the same verb *lo* ‘stew’ cannot change its tone any more and must take its original tone 55, as shown in (100).

JSM³¹

(constructed)

(99) *Tikha lo⁵⁵⁻²⁴ siak²⁴ lo.*
pig.trotter stew be.cooked DM

‘The pig trotters have been cooked by stewing them.’

(100) *Tikha mbian lo⁵⁵, siak²⁴ leh kui puann lit lo.*
pig.trotter not.need stew be.cooked DUR much half day DM

‘No need to stew the pig trotters any more. They have been cooked for more than half a day.’

In fact, a number of typological studies suggest that prosodic structure may signal a difference between SVCs and bi-clausal structures (e.g., Aikhenvald and Dixon 2006, Pawley 1993, 95). Representative studies by Givón (1990, 1991a, b) show that in a sample of three languages, Tok Pisin, Kalam and Tairora, the possibility of pause within an SVC is much lower than between clauses. Yoruba may also adopt a floating high tone on the last syllable of a subject, which has the grammatical function of validating or actualising a predicative relationship. It seems that the occurrence of such a high tone syllable may also be taken as an indicator of clausal structure (Bisang and Sonaiya 1999, Bisang 2009).

In the RRG literature, intonation pattern is argued to be a clue to the distinction between nuclear and core serialisations in Barai (Olson 1981, Foley and Van Valin 1984, 191, Foley and Olson 1985, 39). As argued by Olson, the nuclear SVC in Barai has only one contour in the clause, whereas the core SVC has two contours. However, more evidence is needed to show whether such an observation on contours can be generalised cross-linguistically.

³¹ The two examples are found in my notes, which were taken when I was doing my MA in China. Their grammaticality and tone sandhi patterns have been confirmed with native speakers of STM.

Therefore, I follow the general idea that the possibility of the occurrence of a prosodic edge contour will be higher between clauses than within an SVC. However, I am not claiming that this criterion may satisfy the division between bi-clausal structures and SVCs. A native speaker may choose to pause in a clause when s/he hesitates, or is interrupted or distracted. The prosodic structure of a construction may also be sensitive to different aspects of a language, as pointed out by Bisang (2009, 797, 803). For example, complementation in Lango may exhibit similar prosodic properties as a single clause (Noonan 1985, 80).

In sum, I justify the diagnostic of prosodic structure as an inter-clausal diagnostic. This diagnostic is restricted to the application of two adjacent verbs in a string in my study. The reason for such an application of this diagnostic can be seen in that a prosodic edge may occur at the right edge of a VO constituent in STM (Section 3.3.1.4.3), which limits the application of such a diagnostic for cross-linguistic examination.

2.5.7 Coordinate Structure Constraint

As long as the conjuncts in a coordinate sentence are semantically parallel, the object argument(s) conform to the *Coordinate Structure Constraint* (hereafter CSC) proposed by Ross (1967), whereby an object cannot be moved out of its conjunct. The CSC is not explicitly mentioned as a diagnostic to distinguish coordinates from SVCs in typological studies (Durie 1997, Aikhenvald 2006) or the RRG treatment of SVCs (e.g., Foley and Van Valin 1984, Foley and Olson 1985, Van Valin and LaPolla 1997, Hwang 2008). In other studies, the CSC is used to diagnose whether a given expression contains an SVC or is a bi-clausal coordinate sentence (Zwicky 1990, Newmeyer 2004, Bisang 2009). Based on the findings of Stahlke (1970) for Yoruba, Newmeyer (2004, 3) and Bisang (2009, 796) also argue for the applicability of the CSC in distinguishing between coordinate sentences and SVCs.

Nevertheless, the CSC as a diagnostic is not waterproof. Both the *Across-the-Board* (hereafter ATB) extraction and *Asymmetrical* extraction of object argument in the coordinate sentence serve as counterexamples (Ross 1967, Goldsmith 1985, Lakoff 1986). They satisfy the semantic characteristics of relatedness and resemblance between the conjuncts, as proposed in Zhang (2009b) based on the findings in Kehler (2002), and allow their objects to be moved out of the conjuncts. Example (101) shows the ATB extraction, as the extracted object (in the form of a *wh*-question word) is shared between the second, third, fourth and the last conjuncts. Example (102) is an example of *Asymmetrical extraction*, where the object is only extracted from the first coordinate conjunct.

(101) What did he go to the store, buy, load in his car, drive home, and unload? (Lakoff 1986, 153)

(102) How many courses can you take for credits and still stay sane?
(Lakoff 1986, 154)

It can be seen that the CSC does not work consistently well in diagnosing clausal coordinate structures. In MC, given the relatedness between the two actions in (47), the object *lunwen* ‘paper’ is extractable in (104). Note that in (103) *na xie shu* ‘those books’ cannot be taken as the topic for the other two clauses (see interpretation b.). On the other hand, it may only be understood as the topic of the first clause (see interpretation a.). However, as the topic of the first clause, it still leaves the second clause as incomplete and the whole expression awkward. Note that the status of the bi-clausal structure is also signalled by the ungrammaticality of passivising the object of V2 (Section 2.5.2) and the ability of marking of the perfective aspect in each clause (see Section 2.5.4). I do not illustrate these respects here.

MC

- (103) *Na xie shu wo kan le, xie le lunwen.*
that some book I read PFV write PFV paper
a. ‘Those books, I read. (And) I wrote the paper.’
*b. Intended: ‘*Those books, I read (and) wrote the paper.’

- (104) *Lunwen, wo kan le na xie shu, xie le.*
paper I read PFV that some book write PFV
‘The paper, I read those books and wrote it.’

A similar pattern of object extraction can be observed in core SVCs, as far as MC (Law 1996), Cantonese (Francis and Matthews 2006), and JSM (my fieldwork data) are concerned. Expression (105) is the original Instrumental SVC in MC. O1 is not extractable, as shown in (106), as opposed to O2, as shown in (107). The Purposive SVC (sub-type 2) in MC and JSM presents the same pattern of object extraction (see Sections 10.2.2, 10.3.1, and 10.3.4).

MC

- (105) *Ta na dao qie le rou.*³²
he hold knife cut PFV meat
‘He cut the meat with a knife.’
(Law 1996, 200)

- (106) **Zhe-ba dao, ta na qie le rou.*
this-CL knife he hold cut PFV meat
‘This knife, he cut the meat with it.’
(Law 1996, 218)

³² Expressions are cited from Law (1996). The glosses are mine.

- (107) *Rou, ta na dao qie le.*
meat he hold knife cut PFV
'The meat, he cut with a knife.'
(Law 1996, 220)

Observation of the CSC is not considered as a necessary criterion of telling coordinate sentences from SVCs, since some arguments in SVCs may seem to obey the CSC and be mistakenly treated as arguments in a clausal coordinate structure, for example, O1 in the Instrumental SVC (Section 8.3.4) and the Purposive SVC (Section 10.3.4) and O2 in the Caused-Motion SVC in MC and JSM (see Section 9.3.4). Based on the observations in English, MC and JSM, it seems that the CSC should be applied as an inter-clausal diagnostic, only in a more restricted fashion. Only when none of the objects in a given expression are extractable can the CSC apply as a sufficient criterion, and distinguish coordinate sentences from SVCs.

2.5.8 Other diagnostics

The diagnostics introduced in this section are not included in my research as key diagnostics. Although they have been mentioned in the literature on SVCs, they are not adopted as the main diagnostics in this study, as they are either insufficient or unnecessary to distinguish SVCs from similar bi-clausal structures or to distinguish sub-types of SVCs. These diagnostics include marking of coordination and subordination, illocutionary force and mood and marking of nominalisation and relativisation. I will discuss them briefly.

2.5.8.1 Marking of coordination and subordination

The characteristic that SVCs are not marked by coordinators or subordinators is usually taken as a necessary formal diagnostic of the SVC status (e.g., Crowley 2002, 56, Aikhenvald 2006, 1). Nevertheless, absence of coordinators and subordinators can not

be considered as a sufficient criterion for the identification of SVCs.

Coordinate sentences and subordinate clauses may occur without taking any explicit marking cross-linguistically. Such examples are asyndetic coordination (*Unmarked conjunction* in Payne (1985a, 25-27)) and some complement clauses (Noonan 1985, 45). Expression (108) is an example in Pacoh, a Mon-Khmer mountain language spoken in Vietnam, originally provided in Watson (1966, 176) and cited from Payne (1985a, 26). Expression (109) is English, in which the complementiser *that* can be omitted. They are formally indistinguishable from SVCs in terms of the non-occurrence of conjunction words or marking of syntactic dependency.

Pacoh

(108) *Do chǒ tóq cayâq chǒ tóq apây.*

she return to husband return to grandmother

‘S/he returns to (her) husband and returns to (her) grandmother.’

(Payne 1985a, 26)

English

(109) I heard (that) Brazil beat Argentina.

(Dixon 2006, 4)

2.5.8.2 Illocutionary force and mood

One of the defining characteristics of an SVC is that all the components in the SVC must share the value of illocutionary force (hereafter IF) and mood (e.g., Aikhenvald 2006, 8). In this section, I argue that impossibility of independent specification of IF and mood is a necessary criterion, but it is not a sufficient one for the identification of SVCs. Moreover, IF is observed at the sentence-level, not at the clause level. Therefore, it cannot be employed to distinguish bi-clausal structures from SVCs.

In the RRG literature, IF and mood³³ are expressed at the clausal layer³⁴ (e.g., Foley and Van Valin 1984, 215, 220-224). Therefore, they seem to function as inter-clausal diagnostics: two values of IF and mood indicate the existence of two clauses. As an example, different values of mood can be expressed in a purpose complex sentence, as argued in Bisang (2009, 798). However, in some types of subordinate clause and even a few types of the second coordinate conjunct in coordinate sentences, restrictions (i.e., impossibility of independent specification) can also be observed with regard to the type(s) of illocutionary force (e.g., Verstraete 2004, 2005, Dixon 2006, 22, Verstraete 2008). The *after*-construction in English does not allow other specifications of IF in the subordinate clause except assertion, as shown in (110) (Verstraete 2008, 782).

- (110) a. The band split after the singer left.
 b. *The band split after why did the singer leave?
 c. *The band split after did the singer leave?
 (Verstraete 2008, 782)

This restriction is also seen in the purpose subordinate clause (Verstraete 2008, 783). The sentence in (111) is intended as a purpose complex sentence. It is ungrammatical, as the main clause asserts an event, while the purpose clause introduces a question.

- (111) *Everybody leaves so that may the priest talk with the couple in private?
 (Verstraete 2008, 783)

This restriction on the value of IF in the subordinate clause consequently results in the identical value of IF in both clauses, i.e., assertion. Consequently, IF takes the whole

³³ IF is the outmost operator of the clause taking the whole clause and other operators within its scope (Foley and Van Valin 1984, 220-223). Also note that there is no such operator as mood in previous versions of RRG (Foley and Van Valin 1984, Van Valin and LaPolla 1997). Instead, the authors use the term “status” to cover the categories of epistemic modality, external negation and realis-irrealis moods (Van Valin and LaPolla 1997, 41). The use of this term is justified in Foley and Van Valin (1984, 213-215). Nevertheless, the term “mood” is used again in Van Valin (2005) equal to the term “illocutionary force”. I am aware that the notions of illocutionary force and mood are related, while I am also aware that a type of mood or sentence type, such as an interrogative, may be associated with different speech acts, i.e., a question or a request. Wherever necessary, I will distinguish and specify the sentence types and the discourse function of them in context.

³⁴ With different wording, Foley and Van Valin (1984, 215) argues that “Status is a peripheral operator”.

sentence as its domain, not a single clause. As a result, SVCs cannot be always distinguished from subordination structures with regard to IF.

In addition, it should also be noted that even if the verbal constituents are specified with distinct IFs in a bi-clausal structure, it does not mean that these verbal constituents cannot occur in an SVC. In MC and JSM, two cores may occur in a core SVC or a bi-clausal structure. In the latter, each clause may take a distinct IF. Expressions (112)-(113) are bi-clausal but superficially similar to the Instrumental SVC.

MC

(112) *Ta na dao, qie rou ma?*

3SG take knife cut meat Q?

‘S/he takes/took the knife. (Will s/he) cut the meat?’

JSM

(constructed)

(113) *I kiah to, tsueh hiak ni?*

3SG take knife cut meat Q?

‘S/he takes/took the knife. (Will s/he) cut the meat?’

With regard to the CSC, as shown in (114), O1 is only topicalised/extracted in the first conjunct (a.) in a bi-clausal structure, and it cannot be interpreted as an SVC (b.). O2 is not able to be extracted, as shown in (115). Presumably, JSM equivalents behave in the same way with regard to the CSC.

MC

(114) *Dao, ta na, qie rou ma?*

knife 3SG take cut meat Q

a. ‘The knife, s/he took/takes, (to) cut meat?’ (bi-clausal)

*b. Intended: ‘The knife, s/he took(. Will s/he)cut meat (with it)?’ (SVC)

(115) **Rou, ta na dao, qie ma?*

meat 3SG take knife cut Q

Intended: 'The meat, s/he took/takes knife to cut?'

2.5.8.3 Marking of nominalisation or relativisation

It has been argued that SVCs can only take one nominaliser or relativiser on a par with a single predicate cross-linguistically (e.g., Aikhenvald 2006, 4, Ameka 2006, 141, Hellwig 2006, 93-94, Kilian-Hatz 2006, 110-111, Lichtenberk 2006, 261-262, Zavala 2006, 281-282). As an example, in Tariana, the subordinator *-ka* follows V2, but takes the whole SVC (marked in square brackets) in its scope.

Tariana

(116) [*nhuta nu-thaketa*]-*ka* *di-ka-pidana*.

1.SG:take 1.SG-cross:CAUS-SUBORD 3.SG.NF-see-REM.PST.REP

'He saw that I took (it) across.' (lit. take-cross)

(Aikhenvald 2006, 5)

However, these two operations can hardly be justified as either inter-clausal criteria or intra-clausal ones as far as MC data are concerned (presumably JSM as well). Nuclear SVCs, core SVCs and bi-clausal structures can participate in the two operations. In other words, marking of nominalisation and relativisation does not distinguish SVCs from bi-clausal structures or sub-types of SVCs. An example of a nuclear SVC in nominalisation and relativisation is given in (117) and (118), marked with *de* (Li and Thompson 1989 Ch. 20, Payne 1997, 225). Nominalisation and relativisation of a core SVC can be found in (119) and (120), marked by *de* as well. Such operations on bi-clausal structures can be seen in (121) and (122). The type of syntactic operation is specified by subscript in each sentence.

MC

nuclear SVC

- (117) [*Ta da si xiyi de*]_{NMLZ} *shi bei tongxue zhidao le.*
3SG hit die lizard NMLZ fact PASS classmate know PFV
'The fact that s/he killed the lizard was known by classmates.'

- (118) [*Ta da si xiyi de*]_{REL} *na tian xia yu.*
3SG hit die lizard REL that day fall rain
'It rained on the day when s/he killed the lizard.'

core SVC

(119)

- (120) [*Xiaohai na dao qie rou de*]_{REL} *na tian*
child take knife cut meat REL that day

ta bama bu zai jia.

3SG parents not at home

'On the day when the child cut the meat with a knife, his/her parents were not in.'

bi-clausal (purpose)

- (121) *Wo mei gaosu ta [wo mai mianfen lai bao jiaozi de]_{NMLZ} *anpai.*
I NEG tell 3SG I buy flour come wrap dumpling NMLZ plan
'I didn't tell him/her the plan that I buy some flour to make dumplings.'*

bi-clausal (coordination)

- (122) [*Ta zuotian he shui jintian shua ya de*]_{REL} *na ge*
3SG yesterday drink water today brush tooth REL that CLF
beizi diu le.
mug lose PFV

‘The mug with which I drank water yesterday and brushed teeth today got lost.’

In this short section, I have reviewed diagnostics that occur in literature and are frequently mentioned as defining characteristics of SVCs. My findings show that these characteristics cannot be taken as consistently reliable diagnostics to establish the distinction either between SVCs and other similar bi-clausal structures or between sub-types of SVCs. Therefore, I do not include them in my research.

2.5.9 Interim Summary

Based on MC and JSM data, I argue that seven inter-clausal diagnostics can be adopted to establish the difference between SVCs and bi-clausal structures. Amongst them, the diagnostic of passivisation of the object of V2 and the diagnostic of tone sandhi pattern between two contiguous verbs with MC and JSM data are proposed in my study as novel diagnostics. In some cases, as I have argued, diagnostics are to be applied in conjunction. The seven inter-clausal diagnostics are listed below:

- a. Negation (independent negation)
- b. Passivisation of the object of V2
- c. Independent temporal location (independent modification by temporal adverbial)
- d. Independent marking of viewpoint aspect
- e. Independent modification by manner adverbial
- f. Prosodic structure
- g. Coordinate Structure Constraint (or CSC)

In addition, I have discussed three criteria that are not considered as primary inter-clausal diagnostics. They include marking of coordination or subordination, illocutionary force/mood and marking of nominalisation/relativisation. I do not employ them in my research.

2.6 Syntactic sub-types of SVCs

This section discusses two commonly identified processes of forming a monoclausal multi-verb structure. I will show that the classification of the two syntactic sub-types of SVCs in RRG is based on observations that have been made in a similar form on other types of multi-predicate constructions in different frameworks. In particular, I will review some existing studies on Mandarin SVCs to support this point. By doing so, I will also show the advantage of separating two levels of argument structure in accounting for the processes of forming different syntactic sub-types of SVC.

2.6.1 Nuclear and Core SVCs

A widely adopted classification of syntactic sub-types of SVCs is *Nuclear vs Core serialisations*³⁵ proposed in RRG (Foley and Van Valin 1984, Van Valin and LaPolla 1997, Van Valin 2005). This distinction is proposed based on the layered structure hypothesised in the RRG framework. Nuclear SVCs are SVCs that form at nuclear level, and core SVCs at core level; both are compatible with a monoclausal analysis. While I assume such a nuclear-core distinction of SVCs in this study, I do not assume that nexus types (such as coordinate or co-subordinate) play a role in the general application of the two notions, namely predicate fusion and argument fusion, adopted in my analysis of SVCs (see Section 2.6.2)³⁶.

The classification of nuclear and core SVCs has been adopted in cross-linguistic studies of SVCs in Barai (Olson 1981, Foley and Olson 1985), Paamese (Crowley 2002), some

³⁵ The terms SVCs and serialisations may be used interchangeably in this study.

³⁶ Nevertheless, evidence shows that SVCs of both the nuclear and core types represent co-subordination nexus. First of all, there is no embedding relationship (i.e., subordinate nexus) between junctives in SVCs. Secondly, SVCs in MC and JSM can be distinguished from clausal coordination with regard to the inter-clausal diagnostics, thus disapproving the coordination nexus between clausal junctives. Moreover, an SVC only accept one modal verb (a core operator), which occurs at the pre-V1 position, e.g., *wo keyi yong dao qie rou* 'I may use knife cut meat'. With different modal verbs, the expression *wo keyi yongdao neng qie rou* 'I may use knife can cut meat' is a bi-clausal structure (i.e., a clausal coordination). Thirdly, predicate fusion in my analysis involves manifestation of unifying two predicative verbs into a single unit. It represents the tightest linkage between the two predicative verbs correlating with only one argument structure. Argument fusion is manifested at the argument structure level by fusing or coindexing the identical arguments contributed by different verbs in the SVCs, while monoclausality is observed in the process of argument fusion. These characteristics of SVCs in MC and JSM all point to the existence of the co-subordinate nexus type in the formation of monoclausal multi-verb construction.

other Oceanic languages (Early 1993, Brill 2007) and White Hmong (Jarkey 2015). A few studies of Mandarin SVCs also adopt such a classification, such as Hansell (1993), Chang (2007) and Hwang (2008). These studies either focus on a particular sub-type of SVC (usually nuclear SVCs), or apply the classification in a general manner (see Hwang (2008, 40-41) for a very short discussion of his classification of SVCs in MC based on Chang (2007)). I will postpone a review of the classification in these studies on Mandarin SVCs to Section 2.7.

In my study, I follow the idea that there is a distinction between nuclear and core SVCs. However, the distinction established between the two types of SVC is not exclusively found in the RRG framework. In the next section, I will show that the syntactic differences established between the nuclear and core types of SVC are also the criteria based on which similar classifications of multi-verb constructions are established in studies in other frameworks.

2.6.2 Predicate Fusion and Argument Fusion

In this section, I identify two distinct processes of forming a multi-verb monoclausal structure, through which SVCs in MC and JSM form: Predicate Fusion and Argument Fusion. While I adopt the terms *Nuclear* and *Core SVCs* from the RRG literature, I argue that such a distinction is not theory-specific. Rather, a similar distinction can be found in studies in other frameworks. By doing so, I base my classification of SVCs in the two Sinitic varieties on a more general consensus on the cross-linguistic classification of multi-verb monoclausal structures.

In this study, I propose that SVCs in MC and JSM form on the basis of two distinct processes: one is *Predicate Fusion*, the other is *Argument Fusion*. I refer to the SVCs that form via *Predicate Fusion* and *Argument Fusion* by the terms *Nuclear SVCs* and *Core SVCs*, respectively (Olson 1981, Foley and Van Valin 1984, Foley and Olson

1985). Definitions of these two processes are given below.

a. Nuclear SVCs form via Predicate Fusion. By Predicate Fusion, I mean that, in a nuclear SVC, the involved verbs fuse into a single predicate (i.e., a new nucleus in terms of the layered structure in RRG), such that it functions as a single verb in terms of the overall argument structure.

b. Core SVCs form via Argument Fusion. By Argument Fusion, I mean that, in a core SVC, component verbs can have partly independent argument structures. The component verbs are linked via argument coindexation in their syntactic argument structures. This syntactic sub-type of SVC does not have an overall argument structure, but the component cores must have at least one core argument in common across their syntactic argument structures.

My proposal regarding the two processes of SVC formation is theory-independent. It may find some resemblance in previous classifications of multi-verb construction (MVC hereafter) formation. In fact, two processes of MVC formation have been commonly identified in previous studies. Butt (1993, 1997) discusses her binary classification of two light verb constructions (LVC hereafter) in Urdu, which form via *Event Fusion* and *Argument Fusion* respectively. A very similar observation of two processes of MVC formation has been made by Baker and Harvey (2010), which are termed *Merger* and *Coindexation* respectively. Despite the different terms, the classifications of the processes of MVC formation made in Butt's and Baker and Harvey's studies share commonalities (see the equation of Butt's classification and Baker and Harvey's in Nordlinger (2010, 247)). Moreover, as suggested in Schultze-Berndt (2012, 205-206), the distinction established between the identified processes of MVC formation in Butt's and Baker and Harvey's accounts is comparable to the nuclear vs. core distinction. In the following, I will illustrate the distinction between the two processes of MVC formation established in previous studies. Drawing on these existing studies, I will also show that a similar classification of the processes of

MVC formation can be made between nuclear and core SVCs.

2.6.3 Event Fusion, Merger and Nuclear SVCs

Studies by Butt (1993, 1997) and Baker and Harvey (2010) characterise complex predicate formation mainly in terms of argument structure. They assume that the argument structure composition of a given complex predicate happens in the Lexical Conceptual Structure (LCS hereafter) (e.g., Jackendoff (1990)), which is proposed for a more elaborate representation of argument structure. Despite the different terms and frameworks adopted in their studies, there does not seem to be any difference between the process of *Event Fusion* (Butt 1993, 1997) and the process of *Merger* (Baker and Harvey 2010) in terms of argument structure composition in a given MVC. A similar process of predicate formation named “complete *Merger*” can also be found in Rosen (1989, 1990). In the following, I will illustrate the similar process of MVC formation observed in Butt’s and Baker and Harvey’s studies. I will also point out the differences and similarities between their approaches to the argument structure of complex predicates and my approach to nuclear SVCs.

Within the framework of LFG, Butt (1993, 1997) provides an account of how two types of complex predicates in Urdu differ in terms of the predicate formation process. One process of complex predicate formation that she identifies is *Event Fusion*. The complex predicate that forms via such a process is the Aspectual complex predicate in Urdu. The process of Event Fusion in the Aspectual complex predicate in Urdu involves two component verbs, one of which is a light verb. The light verb does not have a thematic tier (corresponding to the semantic level of argument structure in my proposal), and is therefore “incomplete” in the sense of Alsina (1993) (Butt 1997, 131). The light verb only specifies semantic properties, such as aspect and volitionality, in the complex predicate. For example, in the complex predicate *banaa liyaa* ‘made completely’, the light verb *liyaa* ‘lit. take’ is a light verb (the original form *le* ‘take’ inflected for aspect,

gender and number) and has an empty thematic tier (Butt 1997, 130). In semantics, this light verb specifies conscious choice and completion. The significant factor that underlies such a process of predicate formation is that the light verb requires the argument structure of the other verb to form the argument structure of the complex predicate. Such a requirement of completing the overall argument structure is represented by the occurrence of a transparent event in the LCS of the light verb. On the occurrence of the transparent event, the overall argument structure of the whole complex predicate forms by means of fusing the empty argument structure (“thematic tier” in Butt’s term) of the light verb with the “complete” argument structure of another verb. That is, the verb *banaa* ‘make’ needs to contribute all of its semantic arguments to the syntax of the Aspectual complex predicate (Butt 1997, 132). The Aspectual complex predicate in Urdu forms a tight unit such that its component verbs cannot be separated from each other, with regard to diagnostics of scrambling, temporal adverbial modification and coordination.

Using an event structure approach, Baker and Harvey (2010) propose that complex predicates may form via *Merger*. In Marra for example, a language spoken in northern Australia, the coverb construction that forms via Merger involves two predicative elements: a finite verb and a coverb. In order to unify both verbs in the *Merger* type of complex predicate, Baker and Harvey (2010) also assume that the finite verb has a light verb counterpart in this type of complex predicate, which contains an incomplete element in its LCS, reminiscent of the transparent event in Butt’s proposal. Not unlike Butt’s approach, this incomplete LCS of the finite verb requires corresponding contribution of the LCS of the coverb (Baker and Harvey 2010, 38). Consequently, this type of complex predicate is only well-formed by merging the LCSs of both verbs into a single LCS, similar to Butt’s account of argument structure composition by Event Fusion.

As I have illustrated in Section 2.3, I do not assume any transparent event or open inner position in the argument structure composition in my analysis of SVCs. In other words,

I do not assume any empty argument structure in the processes of forming SVCs in Sinitic varieties. It is related to my assumption that there is no change in the semantic specification of the component verbs in and outside the SVCs. Therefore, in this respect, my approach to the argument structure in the SVCs in Sinitic varieties is different from the approaches by Butt and Baker and Harvey to the argument structure composition in LVCs in Urdu and Marra.

In nuclear SVCs, two nuclei have merged into a new nucleus such that the whole construction has a single set of arguments, just as a single verb does. As Olson (1981) points out, nuclear SVCs in Barai do not allow a manner adverbial or a negative marker to occur between the component verbs. In my study, the tight structure of the single predicate that forms by means of merging two or more nuclei into one is reflected in at least two respects: argument structure and constituency. As for the argument structure in the nuclear SVCs, the overall argument structure is jointly determined by both component verbs rather than any individual lexical item in the construction (see Section 2.6.4). Therefore, in terms of possession of a single set of syntactic arguments, nuclear SVCs in MC and JSM behave in the same way as those complex predicates that have been analysed in the literature as forming through Event Fusion or Merger. Moreover, with regard to the intra-clausal diagnostics established in this study (see Section 2.7.2), I will also show that the component verbs in the nuclear SVCs in MC and JSM cannot be separated from each other by inserting intervening material, or by coordination (see Sections 2.7.2.2-3). That is, the nucleus in the nuclear SVCs in MC and JSM is also characterised by structural tightness, as observed in the Aspectual complex predicate in Urdu as well. Note that in terms of structural tightness, nuclear SVCs may look similar to compound verbs. However, a distinction between the two categories can be established with regard to the lexical diagnostic of reduplication. For details, see Section 2.6.5.

2.6.4 Argument realisation in Mandarin Nuclear SVCs

As I have discussed in Sections 2.6.2-3, nuclear SVCs form via predicate fusion. A nuclear SVC acts as a single verb in terms of having a single set of syntactic arguments. In this section, I will show that there are a few patterns of argument realisation in Mandarin nuclear SVCs that are hardly explained by a lexicalist approach. In these patterns of argument realisation, both component verbs jointly determine the overall argument structure. These patterns of argument realisation can be better accounted for in the light of the separation of two levels of argument structure (see Section 2.3).

In a lexicalist approach³⁷ to Mandarin nuclear SVCs, it is always assumed that realisation of the syntactic arguments in the construction is determined by a lexical item. Such studies in Chinese linguistics can be particularly seen in Li (1990b) and Cheng and Huang (1994). They argue that V1 is the head in what corresponds to my Nuclear SVCs.³⁸ As pointed out by Li (1990b), the subject argument of V1 is always realised as the subject of the expression. However, as argued in Huang and Lin (1992) and Zhang (2009a), the lexicalist approach to the argument structure in the nuclear SVCs does not account for the cases where the pattern of argument realisation in the construction is unpredictable from the argument structure of any individual verb that occurs in the expression. Examples as such are provided in (123) and (124).

MC

- (123) *Ta ku shi le shoupa*³⁹
 She cry wet PFV handkerchief
 ‘S/he cried and as a result the handkerchief got wet.’

³⁷ The *lexicalist approach* or the *projectionist approach* to syntax assumes that the syntactic structure of the sentence that a lexical item heads is largely determined by the lexical properties of this argument-taking lexical item. To put it in another way, in such an approach, realisation of syntactic arguments of a verb is largely predictable from the lexical semantics of the verb. See a discussion in Wasow (1985). A comparison between the lexicalist approach and other approaches to syntactic argument realisation can also be found in Levin and Rappaport Hovav (2005).

³⁸ They claim that what correspond to my nuclear SVCs are compounds. However, a distinction made between nuclear SVCs and V-V compound verbs in MC can be observed with regard to reduplication, as discussed in Section 2.6.5.

³⁹ The expressions are cited from Zhang (2009, 137, 143). I adopt my own glosses for the consistent representation of data in the thesis.

(Zhang 2009, 137)

(124) *Ta ti po le tade qiuxie.*

He kick break PFV his sneaker

‘He kicked-broke his sneaker (because he played soccer every day).’

(Zhang 2009, 143)

As can be seen in (123), the overall transitivity of the SVC cannot be predicted by the intransitivity of the component verbs *ku* ‘cry’ and *shi* ‘be wet’. Moreover, in (124), what is realised as the object of the SVC is not the semantic argument that denotes what was kicked, as entailed from the semantics of V1 *ti* ‘kick’. The argument realisation pattern of (123) has been illustrated in Section 2.4 in terms of the two levels of argument structure assumed in my analysis and I do not repeat it here.. I will describe the argument realisation pattern of the serial verbs in (124) in a later paragraph further below.

There are two general patterns of argument realisation in the nuclear SVCs depending on whether the component verbs share the same semantic configuration. As I have discussed in Section 2.3, the component verbs in the SVCs have the ability of contributing semantic arguments to the construction. In the first pattern of argument realisation, two component verbs in a nuclear SVC by definition have the same semantic arguments, i.e., only one set of semantic arguments is selected for contribution to the syntactic level of argument structure. This pattern can be seen in the expressions of the Cause-Effect SVC (see Ch. 4), such as *zou lei* ‘lit walk be.tired’, *ting dong* ‘lit. listen.to understand’, *song gei* ‘send give’ and expressions of the Manner-Motion SVC (see Ch. 5), such as *zou lai* ‘walk come’, and *pao guoqu* ‘run cross.go’. I take the expression *ting dong* ‘lit. listen to understand’ as an example. Each verb requires semantic arguments of an actor who listened and the content that was listened to or understood by the actor. The argument structure of the nuclear serial verbs in (125) can be represented in (126).

MC

(125) *Lisi ting dong le yingyu.*

PN listen.to understand PFV English

‘Lisi listened to English and understood it.’

(126) Argument realisation of the serial verbs *ting dong* ‘lit. listen to understand’

SYN [SUB *Lisi*, OBJ *yingyu* ‘English’]

SEM [Atr, Udg (i.e., Content)]

SEM1 [*ting* ‘listen to’ <Atr *Lisi*, Content *yingyu* ‘English’>]

SEM2 [*dong* ‘understand’ <Atr *Lisi*, Content *yingyu* ‘English’>]

As represented in (126), the serial verbs *ting* ‘listen to’ and *dong* ‘understand’ require the same set of semantic arguments: Actor *Lisi* and Content *yingyu* ‘English’ (the Content argument can be considered as a kind of undergoer). Since there is no difference in the semantic configuration of the two component verbs in the nuclear SVC (i.e., the Cause-Effect SVC), only one set of semantic arguments is necessary in the process of syntactic argument realisation.

A very similar pattern of semantic argument selection and syntactic argument realisation can also be observed in other expressions of the nuclear SVC type. I do not illustrate them in detail here. But note that in a few sub-types of nuclear SVC, individual verbs may contribute non-core arguments into the construction. These arguments may also take the place of an object argument, but they are not considered as a core argument in the SVC. They include *fan* ‘meal’ in the subject-oriented Cause-Effect SVC (Ch. 4 and Section 11.2.2) and the argument that specifies a location in the Manner-Motion SVC (see Ch. 5).

It is noteworthy that co-referentiality between semantic arguments plays an important

role in determining syntactic argument realisation in the nuclear SVCs (Shi 2005a, 2008). This factor is particularly observed when the same referent has different semantic “labels” with regard to different component verbs, shown in (127).

MC

(127) *Ta zou lei le.*

3SG walk be.tired PFV

‘S/he walked and got tired (after walking).’

(128) Argument structure of the intransitive SVC *zou lei* ‘walk be tired’

SYN [SUB *ta* ‘s/he’]

SEM1 [*zou* ‘walk’ <Atr *ta* ‘s/he’>]

SEM2 [*lei* ‘be tired’ <EPR *ta* ‘s/he’>]

As shown in (128), despite the different semantic labels associated with the same referent *ta* ‘s/he’, only a subject syntactic argument is required in (127).

The other pattern of syntactic argument realisation in nuclear SVCs is observed in the sub-types of the Cause-Effect SVCs where each component verb contributes a distinct set of semantic arguments. As I have argued in Section 2.4, a process of semantic argument selection is necessary before syntactic argument realisation in some sub-types of the nuclear SVCs. In this process, the actor and undergoer arguments in the overall event are selected to be realised as subject and object arguments respectively. The characteristics of these semantic arguments that are responsible for their representation in syntax can also be accounted for by adopting the notion of “causal chain” or “force-dynamic chain” (e.g., Croft 1991, 2012). Expressions of these sub-types include *da si* ‘lit. hit die’, *jiao hui* ‘lit. teach know’ and the expressions (123) and (124) that are repeated in (129) and (130) respectively.

MC

(129) *Ta ku shi le shoupa*⁴⁰
 She cry wet PFV handkerchief
 ‘S/he cried and as a result the handkerchief got wet.’
 (Zhang 2009, 137)

(130) *Ta ti po le tade qiuxie.*
 He kick break PFV his sneaker
 ‘He kicked-broke his sneaker (because he played soccer every day).’
 (Zhang 2009, 143)

I have illustrated the processes of argument selection and realisation of the serial verbs *ku shi* ‘cry wet’ in Section 2.4. I will discuss the argument realisation pattern of the serial verbs *ti po* ‘kick be.broken’ in this section, as the same serial verbs seem to allow some flexibility regarding the realisation of the object argument. Compare (131) with (124) (or (130) above).

MC

(131) *Ta ti po le qiu.*
 3SG kick be.broken PFV ball
 ‘S/he kicked the ball so that it got broken.’

With a lexicalist approach, only the argument *qiu* ‘ball’ contributed by V1 can be predicted to be realised as the object, not the argument *qiuxie* ‘football shoes, sneakers’. However, while taking the semantic level of argument structure into consideration, such a disadvantage can be overcome, without assuming V1 as the head (cf. Li 1990b, Cheng and Huang 1994).

In fact, as far as the semantics of the verb *ti* ‘kick’ is fully considered, a range of

⁴⁰ The expressions are cited from Zhang (2009, 137, 143). I adopt my own glosses for the consistent representation of data in the thesis.

semantic arguments is detailed in it, including not only the item that was kicked, but also the item with which the action of kicking was conducted. To be more precise, the action of kicking requires the person to bring about a contact between both the (foot)ball and his/her shoes. Once the range of possible semantic arguments of the verb *ti* ‘kick’ is reasonably enlarged, one more possibility of the pattern of object realisation with the same serial verbs *tipo* ‘kick be.broken’ can be permitted. That is, either the argument that denotes the ball or the argument that denotes the shoes can be realised as the object argument. This phenomenon is also discussed in Huang and Lin (1992), who argue that selection of object argument from the candidate proto-patient arguments is dependent on the context.

(132) Object realisation of the serial verbs *tipo* ‘kick be.broken’

SYN [SUB *ta* ‘S/he’, OBJ *qiuxie* ‘football shoes’/*qiu* ‘ball’]

SEM [Atr, Udg]

SEM1 [*ti* ‘kick’ <Atr *ta* ‘S/he’, INSTR *qiuxie* ‘football shoes’, PNT *qiu* ‘ball’>]

SEM2 [*po* ‘be.broken’ <Udg *qiuxie* ‘football shoes’/*qiu* ‘ball’>]

As shown in (132), the semantic arguments of the verb *ti* ‘kick’ include both *qiuxie* ‘football shoes’ and *qiu* ‘ball’. Both items are in contact with each other in the action of kicking the football. Either item may undergo the change of state of becoming broken, denoted by V2 *po* ‘be broken’ in the expression. As I have argued in Section 2.4, there is a process of semantic argument selection in these sub-types of nuclear SVCs before realising arguments in the syntax. In this expression, such a process of semantic argument selection is necessary in order to map only one object in syntax, as V1 is able to contribute two potential undergoer arguments to the semantic argument structure of the fused predicates. Since both *qiuxie* ‘football shoes’ and *qiu* ‘ball’ can be considered as the undergoer argument that is affected in the action of kicking, either of them can be realised as the object in syntax.

2.6.5 V-V compound verbs and Nuclear SVCs

As I have discussed in Section 2.6.3, both compound verbs and nuclear SVCs are characterised by structural tightness. In fact, a number of existing studies call what correspond to the nuclear SVCs in my analysis as compounds; see e.g., Chao (1968 [2011]), Tai (1984), Li and Thompson (1989), Chang (1990), Li (1990b), and Cheng and Huang (1994). A few other studies have been arguing for a distinction between V-V compounds and nuclear SVCs; see e.g. Hansell (1993, 208-212), whose argument for such a distinction is also followed by Chang (2007, 236). Hansell (1993) argues that nuclear SVCs differ from compounds in terms of temporal structure, ability of enhancing valence, and their ability of occurring in the (in)ability construction. Regarding the temporal structure, the expressions of nuclear SVCs may be adopted as a means to specify the accomplishment aspect, as there are no single accomplishment verbs in MC (Tai 1984). Given that nuclear SVCs form on the basis of predicate fusion, it is however irrelevant to argue for the characteristic of enhancing valence in nuclear SVCs. Moreover, since I do not argue for a derivational relationship between sub-types of nuclear SVCs and the (in)ability construction (see Ch. 1), I do not comment on Hansell's argument in this respect. In this study, I take the standpoint that a straightforward distinction between compound verbs and nuclear SVCs in terms of their (in)ability of taking part in a lexical process, reduplication.

By examining several phenomena of reduplication in MC, Dai (1992, 127-145) concludes that reduplication in MC is not a syntactic process but a morphological one. As argued by Dai (1992, 128), reduplication of the whole stem can be observed in lexical items in MC. For example, the monosyllabic volitional verb *pao* 'run' can participate in reduplication *paopao* 'run-run'; the lexical item *taolun* 'discuss' can participate in the reduplication as a whole forming *taolun taolun* 'discuss-discuss'. It is not possible to reduplicate any component part of it forming **tao-tao lun* or **taolun-lun*⁴¹. Liao (2014, 17) clearly shows that *chi hun* 'eat meat' can participate in

⁴¹ Meanwhile, it is also noteworthy that some grammatical units in a sentence may display properties of a lexical

the NP-coordination *chi hun han su* ‘eat meat and veggies’, thus suggesting its status of syntactic construction. In line with this observation, it can be seen that *chi hun* ‘eat meat’ cannot be reduplicated as a whole (e.g., **chi hun chi hun* ‘eat meat eat meat’), suggesting it is not a lexical item.

In this study, I defend the view that V-V compound verbs can also be differentiated from nuclear SVCs in that the former is able to occur in reduplication of the whole expression, as opposed to the latter. Table 1. shows a comparison of the behaviours of V-V compounds and expressions of the nuclear SVC type with regard to lexical reduplication.

Table 1. *Lexical Reduplication*

V-V compounds	Expressions of the nuclear SVCs
<i>zhichi</i> ‘support’ → <i>zhichi zhichi</i> ‘lit. support hold’ ‘support support’	<i>dasi</i> → <i>*dasi dasi</i> ‘hit die’ ‘hit die hit die’
<i>taolun</i> ‘discuss’ → <i>taolun taolun</i> ‘lit. beg discuss’ ‘discuss discuss’	<i>kushi</i> → <i>*kushi kushi</i> ‘cry be wet’ ‘cry be wet cry be wet’
<i>dasao</i> ‘clean’ → <i>dasao dasao</i> ‘lit. hit clean’ ‘clean clean’	<i>chibao</i> → <i>*chibao chibao</i> ‘eat be full’ ‘eat be full eat be full’

As can be seen in the table, only the V-V compounds can be reduplicated as a whole in contrast to the expressions of nuclear SVC. Since reduplication of the whole given expression is a lexical process in MC, the split behaviour of V-V compounds and expressions of nuclear SVC with respect to this process suggests that only the former can be considered as lexical items, while the latter should be regarded as expressions of a syntactic construction. A similar observation is also made in Li and Thompson (1989, 235) and Xuan (2011, 69), who however use such a phenomenon to argue for a temporal distinction between the two categories (see Li and Thompson (1989, 232-236) for a discussion of the “delimitative aspect” that forms via lexical reduplication).

item or a syntactic construction with regard to the diagnostic of reduplication depending on their syntactic position in the sentence. For details, see Huang (1984) and Dai (1992, 136-137).

2.6.6 Argument Fusion, Coindexation and Core SVCs

The other process of forming a multi-verb monoclausal structure in Urdu posited in Butt (1993, 1997) is named *Argument Fusion*. In the following, I will show that this term corresponds to the process of MVC formation termed *Coindexation* in Baker and Harvey (2010), and to the formation of *core SVCs* in RRG (Olson 1981, Foley and Van Valin 1984, Foley and Olson 1985). A very similar process named “partial Merger” can also be found in Rosen (1989, 1990).

Unlike the Event Fusion process, the involved component verbs in the process of *Argument Fusion* are complete in terms of argument structure, reflected by the complete thematic tier in the LCS (Butt 1993, 1997)⁴². An example of this is the Permissive MVC in Urdu, as shown in (133).

Urdu

(133) anjum=ne saddaf=ko haar banaa-ne
Anjum.F=Erg Saddaf.F=Dat necklace.M=Nom make-Inf.Obl

di-yaa

let-Perf.M.Sg

‘Anjum let Saddam make a necklace.’

(Butt 1997, 133)

In such an MVC, both verbs contribute arguments at the thematic tier. The MVC of this type forms by means of uniting two identical arguments in the separate LCSs of its component verbs so that only one argument is realised in the syntax. In (133), both

⁴² Butt (1993, 1997) assumes a transparent Event as one of the arguments of an involved verb in this type of MVC in Urdu. By substituting the transparent Event argument with the argument structure of the other component verb of the MVC, the process of argument fusion is triggered.

verbs *banaane* ‘make’ and *de* ‘let’⁴³ contain the same argument *Saddaf* in the LCSs, however only one argument is kept in syntax. The argument structure of each component verb may have partial independence, such that component verbs may contribute distinct arguments to the MVC from their separate argument structures. In this case, the argument *Anjum* is only contributed by the verb *di* ‘let’ and the argument *haar* ‘necklace’ is only contributed by the verb *banaane* ‘make’. What is noteworthy in the Permissive MVC in Urdu is that, despite its monoclausality, i.e., the fact that it can be distinguished from bi-clausal structures (e.g., the Instructive complement clause), it exhibits similarities to the latter with regard to the diagnostics of scrambling, negation, and coordination.

The very similar process of argument coindexation in Butt’s proposal is straightforwardly termed *Coindexation* by Baker and Harvey (2010). As explicitly defined by them at the beginning of the chapter, the monoclausal structure that forms via such a process only requires some arguments to be coindexed at the syntactic level of argument structure (Baker and Harvey 2010, 13). In further argumentation for such a process, they show that the verbs that participate in the process of (argument) coindexation have complete information in their LCSs, in contrast with the case in the Merger process (Baker and Harvey 2010, 38). Moreover, in a similar fashion to the verbs in the Permissive MVC in Butt’s account, the component verbs of the MVC that forms via *Coindexation* in Baker and Harvey (2010) are characterised by being able to introduce non-subcategorised arguments to a monoclausal structure.

From the above description of the processes of *Argument Fusion* and *Coindexation*, it is apparent that they describe the same process of MVC formation in that first, their component verbs have complete argument structures in the sense of Alsina (1993); secondly, there is always at least one shared argument across argument structures in this type of MVCs; thirdly, the separate argument structures are linked via coindexing the

⁴³ In some parts of Butt’s studies on the Permissive complex predicate in Urdu, this verb is glossed as “give” and occurs in the form of “di(i)”.

identical arguments. That is, the component verbs, or precisely their argument structures, are linked to each other by coindexing or fusing their identical arguments while partly maintaining their independence in terms of argument structure.

The same process of MVC formation is also observed in the *Core SVCs* in my study. Unlike in nuclear SVCs, component verbs in the core SVCs have a relatively independent status in terms of their argument structure. As a correlate, the component verbs may introduce distinct arguments into the SVC. These arguments are blind to some syntactic operations (see a similar point about introducing a “non-categorised argument” in the SVC in Baker and Harvey (2010, 18)). For example, the commonly termed “instrumental argument” in MC and JSM must reside within the argument domain of V1 and it is consequently blind to syntactic operations, such as extraction and passivisation (see Ch. 8). The two cores in a core SVC are linked via argument fusion or coindexation, which usually involves the subject argument (basically the actor argument) cross-linguistically (see Section 2.6, Aikhenvald (2006)⁴⁴). Via argument fusion, only one argument is realised in syntax. Realising two identical arguments is not allowed in core SVCs (even in the form of anaphoric reflexives) (see Section 2.4). Moreover, unlike the nuclear SVCs, the core SVCs allow their component verbs to be separated by means of inserting intervening material or independent coordination (Sections 2.7.2.2 and 2.7.2.3). In some sub-types of core SVCs, two cores jointly determine the position of the undergoer argument so that it must be topicalised before V1 in the SVC, unlike the undergoer argument of a single transitive verb that can undergo optional topicalisation (see Section 2.4 and Section 2.7.2.4 for more details).

2.6.7 Argument realisation in Mandarin Core SVCs

Although studies on Mandarin SVCs have shown that SVCs should contain only one

⁴⁴ However, Aikhenvald’s argument is problematic in that she does not distinguish argument sharing that happens at the syntactic argument structure level and the one that happens at the semantic argument structure level.

subject argument, there has been no clear account as to how the arguments are realised in core SVCs. This problem is particularly apparent when the core SVCs are compared with the nuclear SVCs in terms of their argument structure.

In a lexicalist approach to the core SVCs in MC, Li (1991) maintains his view of arguing that V1 is the head in the Instrumental SVC. However, if V1 is the head of the core SVCs, it remains unclear as to how V1 determines the argument structure in a core SVC (in fact, there are two separate argument structures). In particular, with regard to the intra-clausal diagnostics in my study, his argument is not tenable on the basis of my observations that O1 remains in the argument domain of V1 in the Instrumental SVC in MC and JSM, while V2 has its own argument structure which is linked to V1's via argument fusion. Also, with regard to the diagnostic of coordination, either core in a core SVC is allowed to be individually coordinated, which further weakens the argument of V1 as the head.

In my analysis, the core SVCs involve two separate syntactic argument structures that are linked via argument fusion (or coindexation) (see Section 2.6.6). Such an account is provided on the basis of both MC and JSM data as well as observations of related MVC formation cross-linguistically. For details of the account, see Section 2.4.

2.6.8 Interim Summary

In the above discussion, I have shown that, despite the different terms adopted in studies on MVC formation, only two processes are commonly identified: predicate fusion and argument fusion. The former refers to the process whereby the component verbs have fused into an atomic/indivisible unit that takes a single set of arguments. *Event Fusion*,

Merger and *Nuclear SVCs* fall into this type. The latter refers to the process whereby the component verbs form a relatively looser structure, in that each of them remains partly independent in terms of argument structure. Such a process is observed in *Argument Fusion*, *Coindexation* and *Core SVCs*. I use the labels *Nuclear SVCs* and *Core SVCs* throughout the thesis to refer to the two syntactic sub-types of SVCs that form via these two processes respectively. In the following section, I will discuss in detail the diagnostics that can be adopted to distinguish the two syntactic sub-types of SVCs.

2.7 Intra-clausal diagnostics

The term “intra-clausal diagnostics” refers to the diagnostics that are operative within a single clause. They are adopted to distinguish nuclear and core serialisations. As I have discussed in Section 2.5, diagnostics, such as negation, independent modification by manner adverbial and prosodic structure, were treated as diagnostics that distinguish nuclear and core SVCs by Olson (1981) and Foley and Olson (1985). However, they have been justified as inter-clausal diagnostics in my study, i.e., they serve to distinguish SVCs from bi-clausal structures. Before I continue to illustrate the intra-clausal diagnostics adopted in this study, I will review some more diagnostics that have been applied in the existing studies to establish the distinction between syntactic sub-types of SVCs.

2.7.1 Other existing intra-clausal diagnostics

A few studies on Mandarin SVCs adopt the classification of core and nuclear SVCs, such as Hansell (1993), Chang (2007) and Hwang (2008). A study by Peng and Chappell (2011) on SVCs of another Sino-Tibetan language, Jinghpo⁴⁵, also employs

⁴⁵ The name is also written as *Jingpho*, *Jinghpaw*, or *Chingp'o*.

such a classification. These studies either focus on a particular sub-type of SVCs, usually the nuclear SVCs (e.g., Hansell (1993), who mainly bases his study on the SVC classification by Li and Thompson (1989) but correctly includes the nuclear SVCs as a syntactic sub-type of Mandarin SVCs), or apply the classification in a general manner, mostly because the studies do not focus on the classification itself (see e.g., Hwang (2008, 40-41) for a short discussion of his basis on Chang (2007) for the classification of SVCs in MC). In the following, I review the representative studies by Chang (2007) and Peng and Chappell (2011), as both of them adopt diagnostics to identify the structures of SVCs in a particular language.

The study by Peng and Chappell (2011) focuses on a particular type of nuclear SVC in Jinghpo: the “recipient and benefactive construction” as they call it. Their diagnostics for the status of the nuclear SVC concern the constituency. The nuclear SVC in Jinghpo in their study forms a tight structure so that nothing can go in between the serial verbs. The nuclear serial verbs *ka³³ ya³³* ‘lit. write give’ in (134) cannot be separated either by an object or a negative marker⁴⁶, as shown in (135) and (136). The diagnostic of inserting intervening material in the SVC is also adopted in my study; see Section 2.7.2.2.

Jinghpo

- (134) *Ngai³³ shi³³ hpeʔ⁵⁵ sha³¹kram³³ ka³³ ya³³ sai³³.*
 1SG 3SG DPM letter write give PFV
 ‘I wrote a letter to him.’

- (135) * *Ngai³³ sha³¹kram³³ ka³³ shi³³ ya³³ sai³³.*
 1SG letter write 3SG give PFV

⁴⁶ However, according to these authors, nuclear SVCs in Jinghpo also include expressions that may contain an auxiliary-like element between the component verbs. For details, see Peng and Chappell (2011, 145).

Intended meaning: ‘I wrote a letter to him.’

(136) **Ngai*³³ *shi*³³ *hpeɿ*⁵⁵ *sha*³¹*kram*³³ *ka*³³ *n*³³ *ya*³³ *sai*³³.

1SG 3SG DPM letter write not give PFV

Intended meaning: ‘I did not write to him.’

(Peng and Chappell 2011, 144)

Moreover, their findings show that the object arguments in this type of SVC allow flexible ordering on the left side of V1. For example, the objects in (134) can also occur in the order shown in (137).

Jinghpo

(137) *Shi*³³ *hpeɿ*⁵⁵ *ngai*³³ *sha*³¹*kram*³³ *ka*³³ *ya*³³ *sai*³³.

3SG DPM 1SG letter write give PFV

‘It was to him that I wrote a letter.’

Peng and Chappell (2011, 144)

The flexible ordering of objects in Jinghpo nuclear SVCs may suggest its behaviour similar to a single verb. While Peng and Chappell (2011) only focus on the flexible ordering between the objects in the recipient and benefactive construction in Jinghpo, my data suggest that the object of Mandarin and JSM nuclear SVCs may undergo optional topicalisation in line with the object of the single verb in a transitive clause, similar to Peng and Chappell’s observation on Jinghpo data. Such an ability of allowing optional topicalisation of the undergoer argument (the object) in nuclear SVCs contrasts with the characteristic of obligatory topicalisation of the undergoer argument in some particular sub-types of core SVC as far as MC and JSM data are concerned. In my study of SVCs, I do not consider optional topicalisation of the object (or flexible ordering of the object) as an intra-clausal diagnostic, as O2 in some sub-types of core SVCs may also be topicalised optionally. However, I do consider obligatory topicalisation of an undergoer argument as a sufficient criterion in diagnosing the status of core SVCs (for

more details, see Section 2.7.2.4).

Unlike the study in Peng and Chappell (2011), Chang (2007), adopting the RRG framework, is concerned with the argument realisation patterns in Mandarin SVCs. Two diagnostics are adopted to distinguish the nuclear SVC (the Resultative construction in his study) from the core SVC (the Purpose SVC) in his study. One is the BA construction; the other is the verb-copying construction. In the following, I will discuss the application of the two diagnostics in Chang's study and I will provide my reasons for not considering these diagnostics in my analysis.

The author argues that the BA construction and the verb-copying construction can serve to diagnose the status of macro-role arguments (i.e., the Actor and the Undergoer roles). Examples of the Resultative SVC that can occur in the two syntactic constructions in his study are repeated in (138)-(141).

MC

Original expression of the nuclear SVC *ku xing* 'cry awake'

(138) *Zhangsan ku xing le Lisi*⁴⁷. .

Zhangsan cry awake PFV Lisi

'Lisi was awake from Zhangsan's crying.'

(Chang 2007, 239)

BA construction

(139) *Zhangsan ba Lisi ku xing le*.

Zhangsan BA Lisi cry awake PFV

'Lisi was awake from Zhangsan's crying.'

(Chang 2007, 239)

Original expression of the nuclear SVC *he zui* 'drink drunk'

⁴⁷ The expressions are cited from Chang (2007), but the glosses are mine.

- (140) *Zhangsan he zui jiu.*
 Zhangsan drink drunk wine
 ‘Zhangsan was drunk from drinking wine.’
 (Chang 2007, 241)

Verb-copying construction

- (141) *Zhangsan he jiu he zui le*
 Zhangsan drink wine drink drunk PFV
 ‘Zhangsan was drunk from drinking wine.’
 (Chang 2007, 241)

Chang (2007) claims that only the nuclear SVC can occur in the BA construction or the verb-copying construction, as opposed to the core SVC. However, his argument about the inability of the core SVC to occur in the BA construction is weakened as soon as a wider range of core SVCs in MC is examined. Based on my data, several types of core SVCs can occur in the BA construction, such as the Excessive SVC (Ch. 7), the Instrumental SVC (Ch. 8) and the Caused-Motion SVC (Ch. 9). Such a fact does not receive any treatment in Chang (2007). I exemplify the ability of the three sub-types of core SVCs to occur in the BA construction in (142)-(144).

MC

Excessive SVC

- (142) *Ta ba gou wa qian le.*
 3SG BA ditch dig be.shallow LE
 ‘S/he dug the ditch so that it becomes to shallow.’

Instrumental SVC

- (143) *Ta ba na kuai rou yong dao qie le.*
 3SG BA that CLF meat use knife cut PFV
 ‘S/he cut the meat with the knife.’

Caused-Motion SVC

- (144) *Ta ba hua mai hui sushe le.*
 3SG BA flower buy return dorm PFV
 ‘S/he bought some flowers and took them to the dorm.’

Moreover, concerning Chang’s argument about the ability of the nuclear SVC to occur in the verb-copying construction, the rationale of applying it as a criterion to diagnose the status of the nuclear SVC is not clear. In fact, only a few expressions of the nuclear SVCs can occur in such a construction. An ungrammatical example of the verb-copying construction that forms with the same nuclear serial verbs in (138) and (139) is provided in (145), contrasting with the grammatical (141).

MC

Verb-copying construction

- (145) **Zhangsan ku Lisi ku xing le.*
 Zhangsan cry Lisi cry awake PFV
 ‘Lisi was awake from Zhangsan’s crying.’
 (Chang 2007, 240)

What has been noted in studies on the verb-copying construction in MC in general is that the grammaticality of an expression of the verb-copying construction is related not only to the syntactic structure, but also to semantic, pragmatic and even phonological properties (see a detailed discussion in Tai 1999). For example, expression (141) makes a predication of the subject, but expression (145) is intended to make a predication of the object. Given this semantic constraint regarding predication of the subject, it is not surprising that core SVCs that I have examined cannot occur in the verb-copying

construction, since they either make a predication on the undergoer (e.g., the Excessive SVC) or contain two transitive verbs (in particular, the Instrumental SVC and the Purposive SVC).

In addition, based on the criteria of independent argument structure and intervening material, the verb-copying construction itself seems to be some kind of core SVC. In (141), the first core *Zhangsan he jiu* ‘Zhangsan drink wine’ takes the only object argument *jiu* ‘wine’. The second core consists of the original Resultative SVC *Zhangsan he zui* ‘Zhangsan drink drunk’. The subject argument(s) in the two cores are the same (i.e., *Zhangsan*) and have fused into one in the process of argument fusion (see Sections 2.4 and 2.6.6). Consequently, Chang’s argument further gives rise to the problem as to whether the ability of the same verbs that can form a nuclear SVC (the Resultative construction in his study) to occur in a core SVC (the verb-copying construction) can be considered as a criterion for distinguishing syntactic sub-types of SVCs (i.e., the establishment of the nuclear-core distinction). Moreover, in this study of SVCs, I show that the same string of verbs can occur in more than one construction (For an example, see Ch.4 the Cause-Effect SVC and Ch. 6 the Excessive SVC; a summary can also be found in Section 11.1). In sum, the verb-copying construction does not hold as a diagnostic of syntactic sub-types of SVC either.

From the above discussion, I have shown that the diagnostics adopted in Peng and Chappell (2011) are well-motivated, while those adopted in Chang (2007) are not consistently applicable as far as a wider range of SVCs in MC (and JSM) are concerned. In the following section, I will illustrate the rationale and application of the intra-clausal diagnostics that I employ in this study on the basis of my observations of MC and JSM data, while also taking into account of the existing diagnostics in the literature.

2.7.2 Intra-clausal Diagnostics

Intra-clausal diagnostics are applied to distinguish syntactic sub-types of SVCs. Four

syntactic diagnostics are introduced in this section. They are passivisation of the first object (O1), coordination within the SVC, insertion of intervening material and obligatory topicalisation of the undergoer argument.

2.7.2.1 Passivisation of O1

This diagnostic is proposed primarily to show that V1 in non-contiguous core SVCs, such as the Instrumental SVC and the Purposive SVC, has a partly independent argument structure. Precisely speaking, in non-contiguous core SVCs in general, O1 is not passivisable, residing in the argument domain of V1. An ungrammatical expression of passivising O1 in the Instrumental SVC is provided in (146), in contrast to the grammaticality of passivising its O2 illustrated in (44).

MC

Core SVC (instrumental)

(146) **Dao bei ta na qie le rou.*

knife PASS 3SG take cut PFV meat

Intended: ‘The knife was taken by him/her to cut the meat.’

As I have discussed in Sections 2.6.2-4, the component verbs of a nuclear SVC must have fused into a single predicate. The new complex predicate only has a single set of arguments. That is, when a nuclear SVC has only one direct object (i.e., the passivisable object), it is the object of the whole construction. Therefore, there is no such issue as to whether this passivisable object is owned by just V1 or just V2 in the nuclear SVC (see Sections 2.3-4 for argument structure). Although there might be a seemingly exception that in a ditransitive nuclear SVC, only one object is passivisable, such a pattern of object passivisation should be inherited from the component ditransitive verb and it is related with the semantic characteristics of the argument in the construction (see Ch. 4 Section 4.2.2).

Note that this diagnostic has limits. It only applies to non-contiguous core SVCs. For

example, it does not apply to the Excessive SVC, where the only object must be topicalised. Moreover, this diagnostic may be considered as language-specific in that in the symmetrical object type of Bantu languages, both objects are passivisable (see Bresnan and Moshi 1990).

2.7.2.2 Insertion of intervening material

Intervening material is not allowed in between the nuclear serial verbs (Aikhenvald 2006, 1). This has to do with the tight-knitted structure of the nuclear serialisation. Since two component verbs have merged into a single unit in the nuclear SVC, they do not allow anything to occur between them. This diagnostic particularly distinguishes the Cause-Effect SVC from the Excessive SVC. The former is a nuclear SVC, whereas the latter is a core SVC. They are similar at the surface form in that both of them have two adjacent verbs and the same string verbs may occur in either structure. However, the former does not allow any intervening material to occur between the verbs, while the latter accepts insertion of the adverb *tai* ‘too’, as shown in (147). For more details, see Section 7.3.2.

It must be noted that there are two requirements for selecting grammatical material as the intervening material in this diagnostic. One is maintenance of the original syntactic structure; the other is semantic consistency. By “maintenance of the original syntactic structure”, I mean that the inserted intervening material should not change the syntactic structure of the input (or original) expression. By “semantic consistency”, I mean that the resulting expression that accepts intervening material between the cores should keep a very similar meaning to the meaning of the original expression, if they cannot be entirely equal with each other.

As an example, in the Excessive SVC in MC, insertion of the intensifier *tai* ‘too’ does not change its syntactic structure of a core SVC. Moreover, since the excessive meaning in the SVC exists even without the intensifier (see Lu (1990) for a detailed discussion of the origin of the excessive meaning), inserting the intensifier between the excessive

serial verbs only makes the excessive meaning overt, therefore keeping the original excessive meaning. Example (147) is repeated from Ch. 7.

MC

Excessive SVC

(147) *Maoyi nainai zhi (tai) da le.*
sweater grandma weave too be.big LE

‘The sweater has been woven too big.’

The same argument holds for the phenomenon whereby the same string of verbs can occur in a Cause-Effect SVC (a nuclear SVC) and a Resultative SVC (a core SVC). Only the latter allows an intensifier ‘too’ or ‘very’ to occur between the serial verbs, the occurrence of which maintains the structure of the core SVC and overtly expresses the semantic meaning of the core SVC.

Note that non-contiguous core SVCs are indicated by an overt object that occurs between the verbs. The occurrence of this object may be considered a type of intervening material that intervenes with the contiguity of verbs. Nevertheless, the occurrence of this object is usually required by the argument structure of the component verb(s) in the core SVC. That is, in most cases, it is not omissible in the structure. (See Sections 2.4 and 2.6.6 for a detailed discussion on the partly independent status of the component verbs of core SVCs in terms of argument structure). On the other hand, for some core SVCs, such as the Excessive SVC in MC (which involves obligatory object topicalisation) and SVCs in OV languages, a criterion that is more typologically applicable should be proposed to identify the exact structure of a verbal string where two adjacent verbs occur. Therefore, the diagnostic of insertion of intervening material is evoked as a more widely applicable intra-clausal diagnostic.

Meanwhile, this diagnostic also has limits to its application. The type of inserted intervening material is usually decided by the linguistic characteristics of component

constituents and the whole construction. For example, the degree adverb *tai* ‘too’ is adopted in the Excessive SVC in MC, as the overall predication is about a property of an item and it is semantically compatible with an intensifier. The ability of allowing intervening material is a distinct characteristic of the core SVCs, distinguishing them from the nuclear SVCs. I have not been able to find another type of optionally inserted intervening material that can occur in the core SVCs without changing the structure and the semantics of the SVC, except the degree adverb *tai* ‘too’ in the Excessive SVC. Nevertheless, the structure of the core SVC can still be revealed in another way. And I will introduce the other two intra-diagnostics in the following sections.

2.7.2.3 Coordination within the SVC

Coordination may serve as a test for constituency (Haspelmath 2007). This diagnostic has been adopted in analysis of a type of LVC in Urdu by Butt (1993, 1997) (see a related discussion in Section 2.6.6). However, it is a novel intra-clausal diagnostic of the status of SVCs, which has not been applied in previous studies. The structure in nuclear and core SVCs makes them behave contrastively with regard to the diagnostic of coordinating a verbal constituent within the SVC (see Section 2.6).

Coordination of V2(O2) is not possible in the nuclear SVCs; for example in the Cause-Effect SVC, as shown in (148) .

MC

- (148) **Ayi xi bai haiyou ganjing le yifu.*
 aunt wash be.white and be.clean PFV clothes
 Intended: ‘Aunt washed the clothes white and clean.’

Contrastively, core SVCs generally allow either core to be coordinated. Expression (149) shows coordination of the first core in the Instrumental SVC and (150) exemplifies

coordination of the second core. (For JSM equivalents, see Section 8.3.3.)

MC

(149) *Tamen jiao ni yong shaozi, yong kuaizi, chi dongxi.*
they teach you use spoon use chopsticks eat food
'They taught you to eat food with spoons or chop sticks.'

(150) *Wo yong shaozi chi dongxi haiyou xiaochu yandai.*
I use spoon eat food and erase eyebag
'I ate food and erased eyebags with a spoon.'

The constructional meaning is not cancelled when the cores are coordinated in the SVC. For example, (150) does not allow a continuing clause to negate the instrumental interpretation of the argument *shaozi* 'spoon' in the action of erasing eyebags.

MC

(151) *...(150), *buguo wo xiaochu yandai yong de shi yanshuang.*
but I erase eyebag use NMLZ COP eye.cream
Intended: '...(150), but I erased eyebags with eye cream (not the spoon).'

Recall that the object of V2 is not passivisable across a clause boundary (Section 2.5.2). The Instrumental SVC, which allows its first core to be coordinated, still allows the object of the original V2 to be passivised⁴⁸. This behaviour indicates that coordination within the SVC does maintain the structure of the original construction.

MC

(152) *Naxie dongxi bei Lisi yong shaozi, yong kuaizi chi le!*
those foods PASS Lisi use spoon use chopsticks eat PFV

⁴⁸ When the second core is coordinated, the resulting expression does not pass the diagnostic of the CSC. However, the construction meaning of instrumental does interpret the third core to denote an action that is performed with the instrument denoted in the first core.

‘That food was eaten up by Lisi with a spoon or/and chopsticks!’

Coordination within the SVC can also be observed in other core SVCs, such as the Excessive SVC (Section 7.3.3), the Caused-Motion SVC (Section 9.3.3) and the Purposive SVC (Section 10.3.3). Therefore, the ability of allowing coordination within the SVC should be considered as a distinct characteristic of core SVCs that distinguishes them from nuclear SVCs.

2.7.2.4 Obligatory topicalisation of the undergoer argument

This is also a novel diagnostic of the status of SVCs. Obligatory topicalisation of the undergoer argument is attested in both MC and JSM. Such a diagnostic is motivated by the structure of the core SVC. In the light of my postulation of a two-level argument structure, this issue can be better accounted for. Precisely speaking, topicalisation of the undergoer argument is required in a particular type of core SVC due to the requirement of linking two separate argument structures in the SVC. In other words, obligatory topicalisation of the undergoer argument in a particular type of core SVC is a “by-product” of the structure of this core serialisation. Since the advantage of analysing the obligatory topicalisation of an undergoer argument is discussed in Section 7.3.4.2, which takes account of the two-level argument structure in argument structure linkage, only the general idea about obligatory topicalisation as an intra-clausal diagnostic is introduced here.

In a nuclear SVC, the two verbs have fused into a single predicate, which may function as a single verb. It is assumed that, given that the undergoer argument of a single verb in both MC and JSM can undergo optional topicalisation, the undergoer argument of a derived complex nucleus in a nuclear SVC can also undergo optional topicalisation. This is borne out, as the nuclear SVCs in MC and JSM do allow the undergoer argument to be preposed optionally (see e.g., Section 4.3.4).⁴⁹

⁴⁹ However, it must be noted that the object of V2 in core SVCs, such as the Instrumental SVC and the Purposive SVC (sub-type 2) may also undergo optional topicalisation (see Sections 8.3.4 and 10.3.4).

Unlike nuclear SVCs, in a core SVC that consists of a transitive V1 and an intransitive V2, when the only argument of V2 shares co-referentiality with the undergoer argument of V1 at the semantic level of argument structure, this argument must be topicalised before V1 rather than staying after V2 or taking the position between V1 and V2 in the construction. This phenomenon can be observed in the Resultative SVC in JSM (Ch. 6) and the Excessive SVC in MC (Ch. 7) in particular. An example of the Excessive SVC is given in (153). The undergoer argument *gou* ‘ditch’ cannot occur at the sentence-final position, as illustrated in (154), or take the position between the two verbs, a place where it may belong at the semantic level of argument structure of the two component verbs (see a representation of argument structure in the Excessive SVC in Section 2.4), as shown in (155).

MC

(153) *Tamen gou wa qian le.*
 they ditch dig be.shallow LE
 ‘The ditch, they have dug it too shallow.’

(154) **Tamen wa qian le gou.*
 they dig be.shallow LE ditch
 Intended: ‘The ditch, they have dug it too shallow.’

(155) **Tamen wa gou qian le*
 they dig ditch be.shallow LE
 Intended: ‘The ditch, they have dug it too shallow.’

As I have argued in Section 2.4, the two separate syntactic argument structures of a core SVC should be linked to each other via argument fusion. In the Excessive SVC, as shown in (153), the object *gou* ‘ditch’ is the object argument of the activity V1 in the first core, and it simultaneously functions as the subject argument of the stative V2-*le* in

the second core. Despite their co-referentiality, as I have shown in (155), MC does not allow such an argument to occur in the position between the two verbs in the Excessive SVC to simultaneously perform the functions of the object in the first core and the subject in the second core. Moreover, MC does not have a morphological means to mark such a difference of syntactic status or function of the same referent in different cores, either on verbs or on the argument itself. Consequently, topicalisation of such an argument is evoked in the Excessive SVC (and in the Resultative SVC in JSM) as a language-specific means to make the referent of the argument simultaneously accessible for two structurally different cores. For more details, see also Ch. 7 Section 7.3.4. For a similar observation made in the Resultative SVC in JSM, see Ch. 6 Section 6.3.4.

2.7.2.5 Interim Summary

In this section, I have established four intra-clausal diagnostics for SVCs primarily based on my observations of MC and JSM data. Two of them are novel, as they are proposed in my study of SVCs: coordination within the SVC and obligatory topicalisation of the undergoer argument.

2.8 Summary

The diagnostics employed in this study are proposed as a method to distinguish between SVCs and bi-clausal structures on the one hand, and more importantly, between core and nuclear types of SVC. These diagnostics will be applied to both MC and JSM data in the subsequent chapters.

In the section of inter-clausal diagnostics, seven diagnostics were considered as the threshold where the behaviours of bi-clausal structures and SVCs split. These seven diagnostics are:

- a. Negation (independent negation)

- b. Passivisation of the object of V2
- c. Independent temporal location (independent modification by temporal adverbial)
- d. Independent marking of viewpoint aspect
- e. Independent modification by manner adverbial
- f. Prosodic structure (Tone sandhi)
- g. Coordinate Structure Constraint (or CSC)

In the section of intra-clausal diagnostics, four diagnostics are adopted to establish the distinction between nuclear and core SVCs:

- a. Passivisation of O1
- b. Insertion of intervening material
- c. Coordination within the SVC
- d. Obligatory topicalisation of the undergoer argument

Although I restrict myself to data from MC and JSM in discussing the rationale of the diagnostics, it is expected that these diagnostics will be cross-linguistically applicable in principle, though some of them may rely on language-specific phenomena. Tone sandhi, for example, obviously only applies in tonal languages, is thus a language-specific criterion. However, it is still suggested that paralleling diagnostics may also be sought in other languages, such as intonation pattern (Olson 1981) and pause probabilities (Givón 1990, 1991a, b). In addition, it has been noted that the same string of serial verbs may occur in different structures (e.g., the Cause-Effect SVC and the Excessive SVC). In these cases, diagnostics are usually applied in conjunction with each other to these expressions to establish the distinction between different structures.

Chapter Three: Data Resources and Grammatical Categories in Jinjiang Southern Min

This chapter mainly consists of two parts: the first part introduces the data resources, while the second part introduces essential grammatical categories in JSM. In the first part (Section 3.1), I will illustrate the fieldwork methods that I adopted and how the data in my study are interpreted. In the second part (Sections 3.2-3), I will briefly talk about the position of JSM within the Sinitic language family, before introducing the grammatical characteristics of JSM that are closely related to the diagnostics employed in this study.

3.1 Data Resources

A large portion of the MC data present in this thesis was largely obtained by me through introspection (the diagnostics part in particular). A small amount of the MC data was taken from the literature. The (un)grammaticality of these data was also checked by me with other native Mandarin speakers who are based either in Manchester (UK) or China. Since I am not a native speaker of JSM, the JSM data I present in this thesis are mainly obtained from my own fieldwork. A few other examples of JSM or STM are cited from the existing literature.

3.1.1 Fieldwork setting and data collection

I undertook fieldwork in a JSM-speaking area three times during 2013 to 2015, amounting to six months in total. The first period of fieldwork was a one-month pilot study. Each of the next two fieldtrips was of two and a half months' duration.

In mainland China, a large number of STM speakers live in Fujian Province. The cities

Xiamen, Quanzhou and Zhangzhou form the “Minnan (or Hokkien) Golden Triangle”⁵⁰. The fieldwork was conducted in the same village: Bacuo Kexi Village, which is located in Yonghe Town of Jinjiang City, Fujian Province in mainland China. The main data collection method was semi-structured interviews. Interviews were arranged on schedules which were suitable to me and my interviewees. They were conducted in the interviewees’ houses. On three occasions during my fieldwork, I lived with some interviewees in their house. Due to the growing familiarity between me and the local people, I was also invited to local events a few times, such as farming, shopping, worshipping and visiting friends.

I designed a series of questionnaires that contain sets of sentence samples and related expressions of MVC in MC, based on which semi-structured interviews were conducted at different stages. In semi-structured interviews, in general, I used four methods to elicit data from native speakers of JSM. The first is by directly asking interviewees for JSM equivalents of sentence samples that I formulated in MC. The second is by asking the interviewees for the (un)grammaticality judgments on the expressions I constructed in JSM. The third is by me providing a scenario described in MC for the native speakers to provide an expression that s/he would use in JSM in that scenario. The third method was usually used in conjunction with the second method when the (un)grammaticality of a constructed expression appeared suspicious. The fourth method is by using non-verbal stimuli, such as the cartoon book *Frog, where are you?* written by Mercier Mayer (1992) and the video clips developed by the Max Planck Institute for Psycholinguistics (e.g., the “cut and break” clip⁵¹). Moreover, since I was invited to local events, I also had a few opportunities to conduct “participant observation”. However, expressions of SVCs collected via participant observation are scarce. The scarcity of data may be due to a particular scenario that is potentially not suitable for using SVCs. In addition, in some cases I was not authorised to enclose personal communication in my data.

⁵⁰ Detailed information can be found via google or baidu.

⁵¹ Details of this clip can be found via the link <http://fieldmanuals.mpi.nl/volumes/2001/cut-and-break-clips/>.

The duration of each interview was around two to three hours. Sometimes it was longer depending on the schedule agreed between me and the interviewee. The interviews included some interim breaks, which usually took place every hour. But sometimes there were more, mainly due to the interviewees' needs. In most cases, only one interviewee was involved each time. On only a few occasions did more than one interviewee participate in the investigation. In these cases, it was usually due to their need to discuss the use of a particular expression with each other.

Interviews were recorded by a digital recorder (and usually with a backup recorder). During the investigation, I also made eight booklets of fieldwork notes which contain almost all the expressions of the sentence samples and other related expressions that I investigated and some expressions that were not recorded in fieldwork investigations (i.e., via consultation after fieldwork or hearsay). I only have a few clips of narratives in JSM, which are either about the story "Frog, where are you?" or about family events. The recorded clips were transcribed in ELAN after the interviews. Translations of JSM expressions were discussed with native speakers of JSM during or after the interviews.

I was able to work with six native speakers in the fieldwork site during the six-month investigation. Most speakers are above the age of 40. All of them are fluent speakers of JSM and are able to communicate in fluent MC as well. All of these native speakers participated in the first two fieldwork sessions. However, during the third fieldwork session, four of them were fully engaged with family events (such as preparing for and celebrating childbirth, as well as post-natal care), doing multiple part-time jobs and looking after children who were facing immediate exams and, consequently, they only had limited opportunities to participate in brief consultations. As a result, on the third occasion of data collection, the data were obtained by a particular speaker who was available, and the (un)grammaticality of his/her output expressions was confirmed with other speakers who were available at a later time.

3.1.2 Presentation and interpretation of data

For each expression in a particular language, I provide the following information:

- a. The name of the language, e.g., MC, JSM or Paamese.
- b. Expressions that are marked “constructed” are labelled so at the second line. These expressions are constructed by me at a post-fieldwork period, but their (un)grammaticality has been checked with my fellow students who are also JSM speakers (either in the UK or China). (Un)grammaticality of the expressions that are unmarked by such a label was consulted with native speakers during my fieldwork. The judgements of these expressions (i.e., the consultation activities) were recorded in my fieldwork recordings.
- c. Pronouncing presentation of the expression (Pinyin for MC, Romanising presentation for JSM)
- d. Interlinear glossing (My own glossing generally conforms to the Leipzig Glossing Rules; see *Glossing Conventions*. The glossing rules applied in the data that I quote from some previous studies may also be immediately provided in a footnote.)
- e. Translation (free translation in English for grammatical expressions and intended translation for ungrammatical ones)
- f. Citation (examples cited from existing literature are provided with the citation information after the free translation), or metadata (including the starting and the ending times of the audio clip)

In most cases, judgements of the native speakers of a particular type of syntactic structure are consistent. In these cases, grammatical expressions are unmarked at the beginning of the expression. In the last fieldwork, I sometimes encountered the situation that a native speaker may hesitate to answer to (un)grammaticality of a particular expression. In this case, I used the same expression to consult with the other speakers. If half of them (e.g., two out of four) accepted it, the expression is considered as

grammatical. Likewise, if half of them rejected the expression, it is marked as ungrammatical. Ungrammatical expressions are marked by * at the beginning of the expression. Expressions that are ambiguous in meaning or structure are marked by a question mark ?, whose meaning or structure is clarified in the translation line and the immediate argumentation. Correlated interpretations are marked by a. or b. Translations of some expressions are marked by ? or * to indicate that the structure that correlates with a given translation is problematic or entirely unacceptable. There are indeed some occasions that only one or two out of six speakers accepted a particular expression, while others clearly rejected them or hesitated about their acceptability without providing a related scenario for that expression. As to this kind of expressions, I consider them as with limited acceptability, which might need further investigations. I think it may be due to some pragmatic reason, if the expressions are not entirely ungrammatical. The double question marks ?? are used before such an expression to indicate its low degree of acceptability (if it is not immediately and completely rejected by native speakers) .

3.2 Language profile of JSM in Sinitic language family

In China, there is a large Mandarin-speaking area to the north of Changjiang River, while several non-Mandarin language varieties are spoken to the south of the river (Ho 2015). According to Chappell (2015a, b), the Sinitic languages can be classified into ten branches that include Mandarin, Wu, Min, Yue, Hakka, Xiang, Gan, Jin, Hui and Pinghua. The Min variety itself can be broken down into five sub-varieties: Southern Min, Northern Min, Central Min, Eastern Min and Puxian, each of which has distinct linguistic characteristics (Ho 2015), and they are not mutually intelligible (Yuan 2001, 234).

JSM is a variant of STM spoken in the Jinjiang area, which is in the south of China. It is usually considered as a Chinese “dialect” in the literature concerning traditional Chinese linguistics (see Yuan 2001, Li 2007). However, it cannot be understood by monolingual

native speakers of MC. Therefore, it is more like a different language to Mandarin. This also explains why I, as a native speaker of MC, needed to learn this “dialect” and conduct copious fieldwork to collect research data.

3.3 Essential grammatical characteristics of JSM

In this section, some essential grammatical characteristics of JSM will be introduced. Emphasis will be given to those that are closely related to my diagnostics of SVCs in the subsequent chapters, such as the viewpoint aspectual markers, the negative morphemes and the passive marker.

3.3.1 Phonology

A preliminary study of the sound system in JSM can be found in Lin (2009), the first descriptive study of the JSM grammatical system. The information concerning the consonant inventory, vowel inventory and tone sandhi patterns in this section is mainly drawn from his study with moderate adjustment in presentation.

3.3.1.1 Consonants

There are 17 consonants in JSM including the zero initial 0. As in other Southern Min varieties, there is no phonemic contrast between the consonants m/b, n/l and ŋ/g, which are in complementary distribution (Lin 2009, 2, Lien 2015). The voiceless dental affricate consonants /ts/ and /tsh/ can be palatalised before the vowel /i/ or the glide /j/ (Lin 2009, 1).

Table 2. *Jinjiang Southern Min Consonant Inventory (excluding zero initial)*

Manner	Bilabial	Dental	Velar	Glottal
Voiceless stop (unaspirated and aspirated)	p ph	t th	k kh	
Nasal	m	n	ŋ <ng>	
Voiced stop	b		g <g>	
Lateral		l		
Voiceless Affricates		ts tsh		
Voiceless Fricative		s		h

For some of the sounds in the inventories given in this section, I adopt symbols from the Taiwanese Romanisation writing system *Pèh-ōe-jī* (白话字 or POJ)⁵² for practical reasons. The symbols adopted from POJ are shown in brackets < >. One of the symbols is <ng>, adopted for the final consonant /ŋ/. The consonant /g/ is romanised with the symbol <g>. The glottal stop /ʔ/ is represented by <h>⁵³. Besides, I also adopt the symbol <nn> from the *Taiwanese Phonetic transcription system* (or DT) to symbolise nasalisation of vowels.

3.3.1.2 Vowels

JSM has a six-vowel system. The monophthongs are shown in the table below. Note that in the POJ method of Romanisation, both /ə/ and /ɔ/ are represented by <o>. I will comply with this convention only for the simplicity of presentation.

⁵² The Romanisation system adopted for writing STM can be found via the link:
<http://www.omniglot.com/chinese/taiwanese.htm>

⁵³ Note that although there is a fricative /h/ in the JSM sound system, marking the glottal stop by <h> does not pose a problem, as this glottal stop never occurs before a vowel in JSM and it only occurs at the syllable-final position.

Table 3. *Monothongs in Jinjiang Southern Min*

	Front	Central	Back
High	i		u
Higher mid	e		
Lower mid		ə [o]	ɔ [o]
Low	a		

According to Lin (2009), these vowels form another ten diphthongs, including /ia/, /ua/, /iə/, /ue/, /ui/, /iu/, /ai/, /au/, /uai/ and /iau/.

3.3.1.3 Syllable structure

As suggested in Lien (2015, 162), the syllable structure in Min varieties in general can be formulated as (C)V(C). The initial consonant can be filled by a consonant in Table 2 or left null, for example, /ia/ (<ia> ‘yet’⁵⁴) and /tshia/ (<tshia> ‘car’), /ue/ (<ue> ‘draw (something)’) and /hue/ (<hue> ‘flower’). The vowels, including the compound vowels, can be followed by a nasal consonant as the coda, such as /ian/ (<thian> ‘sky’), /iam/ (<tiam> ‘stay’) and /uaŋ/ (<huan> ‘wind’), or be followed by a voiceless consonant /p/, /t/, /k/ as the syllable coda, such as /iap/ (<tsiap> ‘collect or receive’), /it/ (<lit> ‘day’) and /ak/ (<ak> ‘water something’), or a glottal stop /ʔ/, for example, /uiʔ/ (<huiʔ> ‘blood’), /iaʔ/ (<iah> ‘dig’) and /əʔ/ (<ləʔ> ‘descend’). Some vowels may undergo nasalization, such as /ã/, (<sã> ‘clothes’), /uĩ/ (<kuĩ> ‘classifier of house’), and /iũ/ (<siũ> ‘too’). This is in contrast to MC, which does not have voiceless plosives /p, t, k/ as the syllable coda. Moreover, MC does not have a glottal stop /ʔ/ as the coda or use nasalisation for phonemic contrast.

3.3.1.4 Tones

I follow the tradition in Chinese grammar to name the tone categories after their origins

⁵⁴ The round brackets include a sample word to illustrate pronunciation of a particular vowel. In the round brackets, the italicised syllable represents the pronunciation of the word by the International Phonetic Alphabet. The angle brackets <> include the Romanising presentation of the syllable adopted in this thesis, if it is different from the italicised syllable in presentation. Within the single quotation marks is the translation of the expression.

in Middle Chinese: *Ping* “Level”, *Shang* “Rising”, *Qu* “Departing” and *Ru* “Entering” (see Pulleyblank (1984, 136) for a brief introduction of tonal classification in the rime dictionary *Qieyun*).

3.3.1.4.1 Original tones

There are four tone categories in JSM excluding the light tone 0⁵⁵. The Level tone and the Entering tone each have two sub-tones depending on whether the initial of the syllable was originally voiced or not in Middle Chinese. The four tone categories and the value of each sub-tone are shown below. Note that in traditional Chinese grammar, tonal values are represented in numeric notation introduced by Chao (1930), see a related discussion on tonal values in Bao (1999).

Table 4. *Original tones in Jinjiang Southern Min*

Level I	Level II	Rising	Departing	Entering I	Entering II
33	24	55	41	5	24
<i>si</i> ‘poem’	<i>si</i> ‘time’	<i>si</i> ‘history’	<i>si</i> ‘four’	<i>sit</i> ‘lose’	<i>sit</i> ‘fact or solid’

3.3.1.4.2 Tone sandhi

STM in general has more patterns of tone sandhi than MC. Almost all the tones introduced in the last section should undergo tone sandhi before a following tone, which is not a light tone, except the Entering I tone (Lin 2009, 5). Tone sandhi in JSM in general does not produce new tones with an exception that the sandhi of Entering II tone creates a shorter and lower tone with the value of 2. For the detailed conditions of tone sandhi, see Lin (2009, 6). The patterns of tone sandhi in JSM are provided below.

⁵⁵ For the value of the light tone in JSM and some related semantic and syntactic factors, see Ang (1996).

Table 5. *Tone sandhi patterns in Jingjiang Southern Min*

	Original	Sandhi	Example
Level I	33	22	<i>Sia</i> ³³⁻²² <i>kau</i> ³³ 'social contact'
Level II	24	22	<i>lam</i> ²⁴⁻²² <i>hat</i> ⁵⁵ 'the South sea'
Rising	55	24	<i>ho</i> ⁵⁵⁻²⁴ <i>sim</i> ³³ 'kind'
Departing	41	55	<i>po</i> ⁴¹⁻⁵⁵ <i>ue</i> ²⁴ 'cloth shoes'
		22	<i>po</i> ⁴¹⁻²² <i>so</i> ⁴¹ 'tricks'
Entering I	5	-	<i>tshit</i> ⁵ <i>pah</i> ⁵ 'seven hundred'
Entering II	24	2	<i>peh</i> ²⁴⁻² <i>bi</i> ⁵⁵ 'rice'

3.3.1.4.3 Synchronic constraints on tone sandhi

First of all, only the first syllable in a bisyllabic expression changes its tone (iff the second syllable does not carry a light tone). The preceding syllable is read with its original tone when the tone sandhi condition is not met.

Secondly, it has been argued in Chen (1987) that tone sandhi in STM is sensitive to syntactic constituency. A similar finding can also be found in Lin (1994), who also argues that argument NPs assign a prosodic boundary to their right margin in Xiamen STM regardless of their grammatical function, i.e., subject, or object in a PP, or direct object of a verb (Lin 1994, 244-245). As illustrated in (1), the occurrence of the object *tsih* 'money' assigns a prosodic boundary to its right. This object argument can by no means undergo tone sandhi conditioned by *k'i* 'go'. The symbol “#” is used in Chen’s paper to mark the boundary of a tonal domain.

- (1) *t'eq tsih # k'i puaq-kiao*
 take money to gamble
 'Take the money to gamble.'
 (Chen 1987, 121)

Chen also notices that the syntactic constraint in MC prosodic structure does not play such a strong role as in STM. However, I am not going to explore on this issue at the moment. For a discussion concerning the prosodic structure in SVCs, see Section 2.5.6.

3.3.2 Morpho-syntactic categories

3.3.2.1 Nouns and noun phrases

Like other Sinitic varieties, nouns in JSM do not inflect for number, gender or case. They may undergo lexical derivational processes. For example, the noun *to* 'knife' may be followed by a suffix *a* to express the smallness or diminution of the size of the knife in *to a* 'small knife'. This phenomenon is frequently observed in the JSM examples.

Demonstratives and modifiers occur before the modified NP in JSM. I use my own data to illustrate their positions in the sentence. In (2), the demonstrative *hit* 'that' occurs before the classifier *kei* in the NP. The adjective *thiak* 'beautiful' also occurs before the modified noun *thongsi* 'spoon'.

JSM

- (2) *Hit kei lang an tsit ki ia thiak thongsi tsiah.*
 that CLF person with one CLF very beautiful spoon eat
 'That person eats with a very beautiful spoon.'
 00:58:29.937 - 00:58:36.527 MT 98-105 140614-03 15-5-14

3.3.2.2 Verbs and the verbal complex

In JSM, verbs do not inflect for aspect and mood. There is no indexing of arguments on

the verb in JSM. Aspectual distinctions are expressed by free morphemes that are aspectual markers (For specification of the viewpoint aspects in JSM, see section 3.3.2.4 below). Mood may be expressed by modal verbs or negative morphemes (e.g., Yang (2014a)).⁵⁶ (For negative morphemes, see Section 3.3.2.5)

3.3.2.3 Clause structure

The basic word order in JSM is SVO.⁵⁷ A simple clause that contains only one verb may look like (3). The subject and object are not marked on the verb *kiah* ‘take’ or on the NP arguments, *abu* ‘mother’ or *phothau* ‘axe’. The grammatical aspect progressive is expressed by the aspectual marker *ti leh*, which occurs before the main verb. The clause is in the indicative mood, which is not morphologically marked on the verb either.

JSM

- (3) *Abu ti leh kiah phothau*
mother PROG take axe
'Mother is taking the axe.'

00:16:25.990 - 00:16:27.900 MT 98-105 140614-03 15-5-14

3.3.2.4 Markers of viewpoint aspects (or grammatical aspects)

This section focuses on expressions of imperfective, perfective and experiential aspect markings in JSM, especially those closely related to my diagnostics. As to the imperfective aspects, the progressive and durative aspects are introduced. Regarding the perfective aspect, the marker *le* in MC does not have a corresponding aspectual marker in JSM (and in some other STM varieties). The lack of a corresponding aspectual marking for perfective steers me towards adopting experiential aspectual marking in the related diagnostics.

⁵⁶ Since expression of mood is not my concern in this study, I do not illustrate it here.

⁵⁷ JSM, as many STM varieties, usually topicalises an undergoer argument either to suffice the discourse needs or because of a particular syntactic requirement (cf. Lee 2008, Hsieh 2014).

3.3.2.4.1 Progressive marking

The morpheme *leh*⁵⁸ before the main verb is used to express the progressive aspect in STM (Li 1996/2007, 7-9, Tsao et al. 1997, 136-142). JSM is no exception. The morpheme *leh* has a tone value of five, marked as *leh*⁵. Along with *leh*, JSM also employs *ti leh* to mark the progressive aspect (Lin 2009, 67). Compare (4) and (5). Both of them indicate the progressive aspect, with *leh* and *ti leh*, respectively.

JSM

(4) *I leh tshiunnkua.*

3SG PROG sing.song

‘S/he is singing.’

(5) *I ti leh khau lau.*

3SG PROG cry DM

‘S/he is crying.’

(Lin 2009, 68)

Leh is more widely used than *ti leh*. Lin (2009, 68) argues that there might be a prosodic constraint on the use of the latter. Li (1996/2007, 8) argues that the former has grammaticalised further than the latter. In my diagnostic concerning the progressive aspect marking in JSM, *leh* is used.

3.3.2.4.2 Durative marking

The durative marker *leh* has a light tone (marked as *leh*⁰) as opposed to the progressive marker *leh*⁵. The durative *leh* immediately follows the verb, as shown in (6). When there is an object argument that follows the verb, the durative *leh* occurs to the right of the object, as shown in (7).

⁵⁸ It is more commonly presented as *teh* in studies of Taiwanese STM

JSM

(6) *Tianntiann tse leh m sehue.*

still sit DUR NEG talk

‘sitting still, ... does not talk.’

(7) *I tshiu leh phang tsit tei topui leh.*

3SG hand inside hold one CLF tea mug DUR

‘S/he is holding a tea mug in his/her hands.’⁵⁹

(Lin 2009, 72)

3.3.2.4.3 Perfective marking

The perfective marker *le* in MC does not have a corresponding aspectual marker in STM equivalent. Tsao (1998) argues that Taiwan STM uses \emptyset as an equivalent of the perfective marker *le* in MC. The same observation is made for Quanzhou STM (Li 1996/2007, 5-6) and JSM (Lin 2009, 67-68). For similar points, see also Yuan (2001, 270-271) and Shi (2014). A comparison of the use/distribution of the perfective marker between MC (*le*) and JSM (the null form) can be seen in (8) and (9), which express the very similar meaning of completing an action.

MC

(8) *Wo zuotian xie le yi feng xin.*⁶⁰

I yesterday write PFV one CLF letter

‘I wrote a letter yesterday.’

JSM

(9) *Gua tsalit sia tsit tiunn phui.*

I last.night write one CLF letter

⁵⁹ This is an approximate translation of the JSM expression. By translating it with a progressive aspect, I by no means indicate that the original example has a progressive aspect.

⁶⁰ In a discussion of the entailed endpoint in Tai (1984), it is argued that expressions such as (8) do not involve an endpoint. That is, it can still be followed by a clause specifying that the letter has not been finished. However, as a native speaker of MC, I doubt this analysis. To me, if someone says (8), it means the letter has been completed.

‘I wrote a letter last night.’

(Lin 2009, 68)

Given the null form of the perfective aspect marking in JSM, my diagnostic of the independent marking of viewpoint aspect (Section 2.5.4) involves the experiential aspect, which is explicitly marked by the morphemes *pat...tioh*. This experiential aspect marking is introduced in the following section.

3.3.2.4.4 Experiential marking

The experiential aspect in JSM can be marked by *pat...tioh* (sometimes by *u...tioh*). The adverb *pat* ‘before’ occurs before the verb, as does the morpheme *u* ‘lit. have’. *Tioh* may occur immediately after the verb or after the object argument in marking the experiential aspect, or occur in both positions (Li 1996/2007, 11-13, Lin 2009, 89). This is illustrated in (10)-(12).

JSM

(10) *Gua pat thiau tioh bu.*
3SG before jump EXP dance
‘S/he danced before.’

(11) *Gua pat khi Bikok tioh.*
I before go America EXP
‘I have been in America before.’

(12) *Gua pat khi tioh Bikok tioh.*
I before go EXP America EXP
‘I have been in America before.’

(Lin 2009, 91)

In my JSM data, expressions that are marked by two *tiohs* are rare. In my diagnostics, I

use the form ...*pat/u* V *tioh* XP⁶¹... to test the expression that is marked by the experiential aspect in JSM.

3.3.2.4.5 Marking of a future eventuality

Note that the morpheme *beh* ‘lit. want’ is usually used as a modal marker that indicates a future event. It does not occur with other viewpoint aspect markers in my data, which suggests that it is not a typical verb. This modal marker, illustrated in (13), always expresses the intention of the speaker concerning what s/he will do at a later time. I use it in my diagnostics several times.

JSM

- (13) ... , *gua* ... *minna* *beh* *tokhi* *tshulai*.
I tomorrow want/will return house
‘... I will go back home tomorrow.’
00:00:01.210 - 00:00:05.990 LTS 020 10-09-15

3.3.2.5 Negatives

This discussion of negative markers in JSM is concentrated on simple or monosyllabic negatives. They are the basic negatives in the variety and are more commonly used in daily conversation, compared with the compound negatives⁶².

There are four commonly used monosyllabic negative makers in JSM: *m*, *bo*, *bue* and *be* (see Ch. 4, Lin (2009)). They can form the “standard negation” in the sense of Payne (1985b), as the basic means of negating a single clause.

3.3.2.5.1 *m* ‘not’

In general, the negative *m* ‘not’ can negate activity verbs, achievement verbs and a few sub-classes of stative verbs. When it occurs before an activity verb, it can express the

⁶¹ XP stands for post-verbal arguments or other possible grammatical elements in my data.

⁶² I consider compound negatives in JSM as consisting of those in which two negatives undergo phonetic fusion. For example, *bian* ‘don’t (need to)’ is composed of two negatives *m* ‘not’ and *lian* ‘not need’, which merge together at the phonetic level (i.e., in speech) but are still written as apart in practical orthography.

unwillingness of the subject to do something (Lin 2009, 102), as illustrated in (14). Stative verbs can be negated by *m* to cancel the existence of a state, illustrated in (15). For more details, see Ch. 4 Section 2 in Lin (2009).

JSM

- (14) *Amak m sehue.*
PN NEG talk
'Amak doesn't/is not willing to talk.'
(Lin 2009, 102)

- (15) *Gua m tsaiiann.*
I NEG know
'I don't know.'
(Lin 2009, 103)

What is most relevant to my diagnostic of negation is the negation of the experiential aspect marked with *pat...tioh*. In order to negate the experiential in JSM, the negative adverb *m* is used before the adverb *pat* 'before'. An example is given in (16).

JSM

- (16) *Gua m pat khi tioh Eimen*
I NEG before go EXP Eimen
'I have never been in the city Eimen (= Xiamen, in MC) before.'
(Lin 2009, 106)

3.3.2.5.2 *bo* 'not'

Like other varieties of STM (Tsao et al. 1997, Yuan 2001, Li 2003/2007), *bo* 'not' in JSM is usually used to negate the existence of items (17) or possession (18), or amounts (19), to negate the occurrence of an event (20), or the completion of an action (21), or to negate an attribute or property of an item (22) (Lin 2009, 112-120). It usually occurs to

the left of the element that is negated.

JSM

(17) *Tshulai bo lang.*

house NEG person

‘There is nobody in the house.’ (negation of existence of an item)

(18) *Gua bo khathatshia.*

I NEG bike

‘I don’t have any bike.’ (negation of possession)

(19) *Ho bo tsit pah bi khuah.*

river NEG one hundred metre wide

‘The river is not one hundred metres wide’ (negation of an amount)

(20) *Gu bo si.*

ox NEG die

‘The ox did not die.’ (negation of an event)

(21) *I bo kiann kau ohthong.*

3SG NEG walk arrive school

‘I didn’t walk to the school.’ (negation of completion of an action)

(22) *Kho bo ta.*

trousers NEG be.dry

‘The trousers are not dry.’ (negation of a property or an attribute)

The negative *bo* ‘not’ is also used to negate an ongoing event. In (23), the negative *bo* ‘not’ occurs before the progressive marker *leh*.

JSM

(23) *I bo leh tsiah, I leh khuann tiansi.*

3SG NEG PROG eat 3SG PROG watch TV

‘S/he is not eating. S/he is watching TV.’

(Lin 2009, 71).

The negative *bo* ‘not’ may occur between V1 and V2 in the Resultative SVC in JSM. An example has been provided in Section 2.5.1, and I do not repeat it here.

3.3.2.5.3 *be* ‘not (yet)’⁶³

According to Lin (2009, 129-132), negation with *be* ‘not’ usually means that the expected endpoint of an event has not been achieved, as shown in (24). The adverb (*ia*) ‘yet’ usually occurs before the negative. When *be* ‘not’ is used to negate an activity verb, it means that the starting point of the action has not been achieved as shown in (25).

JSM

(24) *Png ia be siak....*

rice yet NEG be.cooked

‘The rice has not become cooked...’

(Lin 2009, 129)

(25) *I be sue tshui.*

3SG NEG wash mouth

‘S/he has not brushed his/her teeth.’

(Lin 2009, 130)

In the Resultative SVC, the negative *be* ‘not’ can occur between the verbs to indicate that the specified result of an action has not been achieved at a reference time. The adverb (*ia*) ‘yet’ may occur before the negative, as illustrated in example (26).

⁶³ It is commonly represented by *bue* in studies of Taiwanese STM.

JSM

- (26) *Tsiah (ia) be pa*
eat yet NEG be.full
'...has not yet become full by eating'
(Lin 2009, 131)

3.3.2.5.4 *bue* 'not'⁶⁴

The negative *bue* 'not' in STM may be a fused element resulting from a merger of the negative *m* 'not' and the modal verb *e* 'can' (Tsao et al. 1997, 320, Li 2003/2007, 146, Lin 2009, 123). Tsao et al. (1997, 320) clearly point out that this negative marker in STM has two functions: to negate ability or to negate a possibility. That is, it can be used to express both epistemic modality and participant-internal/external modality in the sense of Van der Auwera and Plungian (1998). Example (27) illustrates the epistemic modality. The speaker may have such a speculation of the weather when s/he sees a clear sky at night full of twinkling stars. Example (28) illustrates the participant-internal modality: there is a lot of pain in the speaker's leg so that s/he has lost the ability to run at the moment.

JSM

Epistemic

- (27) *Minna lit bue loh ho.*
tomorrow day NEG fall rain
'It will not rain tomorrow.'
(Lin 2009, 123)

Participant-internal

- (28) *Gua kha thiann bue tsau.*
I leg hurt NEG run
'My legs hurt. I cannot run.'

⁶⁴ It is represented by *be* in Taiwanese STM (cf. Tsao et al. 1997, 320)

(Lin 2009, 123)

The above two examples illustrate the common use of the negative *bue* in JSM. For different semantics that result from negating verbs of different semantic classes with *bue*, see Lin (2009, 124).

An idiomatic construction (the (in)ability construction) expressing participant-internal/external modality (Van der Auwera and Plungian 1998) may occur in the form V-*bue*-V. Example (29) can be used in such a scenario, whereby the subject does not have much energy to walk to a place, or the place is too far away for the subject to simply walk there.

JSM

- (29) *Kiann bue kau*
walk NEG arrive
'cannot walk to a place (i.e., arrive there).'
- (Lin 2009, 124)

Liao (2001, 21) shows for Zhangzhou/Xiamen STM that pre-V1 *bue* 'not' may also be adopted to negate a stative verb that denotes an attribute on a par with the negative *bo* 'not' (see Section 3.3.2.5.2). The same individual level predicate *ang* 'be red' can be negated either by *bo* 'not' or *bue* 'not' without involving modalities, as illustrated in (30) and (31).

Zhangzhou/Xiamen STM

- (30) *Hue bo ang.*
flower NEG be.red
'The flower is not red.'
- (Liao 2001, 14)

- (31) *Baktsui bue ang...*
 ink NEG red
 ‘The ink is not red’
 (Liao 2001, 21)

However, in my investigations of JSM negation, a few examples suggest that *bue* ‘not’ and *bo* ‘not’ are not always interchangeable regarding negation of a stative verb. For example, the speakers only choose *bue* ‘not’ to negate the verbs *sian* ‘be tired’, *iann* ‘be tired’ and *thiam* ‘be tired’, but never *bo* ‘not’. Example (32) was said by my interviewee when I asked her if she was tired after washing so many items of clothing (because I saw her washing a lot of clothes for her families on the balcony before the interview). In this scenario, the expression should not be interpreted as denoting the (in)ability of the subject, as opposed to (29).

JSM

- (32) *Bue a. Gua to bue sian a*
 NEG DM I at.all NEG be.tired DM
 ‘No. I am not tired at all.’
 01:26:09.803 - 01:26:11.633 B 15-31 VR0001 29-4-14

The negative *bue* ‘not’ cannot be replaced by *bo* ‘not’, which she and other speakers rejected in the interviews.

JSM

- (33) **Gua bo sian.*
 I NEG be.tired
 Intended: ‘I am not tired.’

However, at this stage the reason is not clear as to why speakers choose one negative over another while both negatives can be used to negate individual-level predicates

(Carlson 1977[1980]). I do not explore this issue here.

3.3.2.6 Topicalisation of an undergoer argument

In general, there are two ways of topicalising an undergoer argument in JSM. But the position of the undergoer argument topicalised by the two ways is different. The first way of topicalisation involves a pre-transitive marker⁶⁵ which introduces the topicalised object after the marker and before the predicate (i.e., V1 in a verbal complex and the main verb in a simple clause). The other way of topicalisation is unmarked. It is conducted without any specific marker: the undergoer argument topicalised in this way can occur either before the subject or at the position after the subject and before V1 (or the main verb in a simple clause). I will illustrate the two ways of topicalisation one by one.

3.3.2.6.1 Pre-transitive markers *kan* and *tsiong*

I use my own data to exemplify the use of the two pre-transitive markers in JSM, as the pre-transitive constructions do not receive any description in Lin (2009). The pre-transitive marker *kan* or *tsiong* always occurs after the subject and before V1 in a clause. In JSM, *kan* and *tsiong* can prepose a post-verbal undergoer argument to the position immediately after the marker and before V1. Note that given its function of marking a pre-V1 object and its pre-V1 position in a sentence, *tsiong* in JSM may be a cognate form of the object marker *jiang* 將 in MC and other Sinitic varieties⁶⁶; it also exhibits similarities to the object marker *ba* 把 in MC in terms of its function and position in the sentence. Examples are given in (34) and (35). The markers in JSM are reminiscent of the pre-transitive *ba* in MC, as shown in (36).

⁶⁵ Given the similar distribution of the preposed object on the occurrence of *kan* and *tsiong*, I call them pre-transitive markers, following Li and Thompson (1989).

⁶⁶ *Tsiong* in JSM is treated as *chiong* 將, a patient marker, by Lien (2002) on the basis of an examination of the function words adopted in *Li Jing Ji*, a play representing STM spoken in Ming Dynasty (approx. 1566 AD), and a chronicle of Quanzhou by Lin (1993). This function word is also attested in other STM-speaking areas, such as Jieyang, Longxi and Xiamen, according to Lien (2002). The marker 將 is adopted as an object marker in other Sinitic varieties as well, which however is argued to be a borrowing from MC, and it is used in the formal register of a particular non-MC variety (Chappell 2015c).

JSM

- (34) *Siang kan tsit tei i a tse phai.*
who PRE this CLF chair sit be.broken
'Who made this chair broken by sitting on it?'
00:02:48.749 - 00:02:50.229 MT 5-8

- (35) *I tsiong i e kau ge si lo.*
3SG PRE 3SG POSS dog starve be.hungry DM
'S/he has starved his/her dog to death.'
00:09:51.399 - 00:09:53.189 MT 15-16 VR0002 30-4-14

MC

- (36) *Shui ba yizi zuo huai le?*
who PRE chair sit be.broken PFV
'Who made this chair broken by sitting on it?'

3.3.2.6.2 Unmarked topicalisation

Unmarked topicalisation involves no specific marker in preposing an undergoer argument. In JSM unmarked topicalisation, the preposed undergoer argument can occur either before the subject or immediately after the subject (and before V1). I illustrate this phenomenon with my own data in (37)-(39). A similar observation is also made for Quanzhou STM; see Li (1997/2007, 49).

JSM

- (37) *I tshih tshingkhi to a.*
3SG wipe be.clean table
'S/he has wiped the table clean.'
00:16:42.735 - 00:16:43.815 MT 15-16 VR0002 30-4-14

(38) *To a li u tshih tshingkhi bo?*
 table you have wipe be.clean NEG
 ‘The table, have you wiped it clean?’
 00:22:32.137 - 00:22:34.037 MT 15-16 VR0002 30-4-14

(39) *I to a u tshih tshingkhi a.*
 3SG table have wipe be.clean DM
 ‘The table, s/he has wiped it clean.’
 00:33:43.160 - 00:33:44.630 B 15-31 VR0001 29-4-14

There is another type of topicalisation of an undergoer argument in JSM. This type of topicalisation is obligatory, in the sense that the undergoer argument cannot occur after the predicate following the canonical SVO order. A similar phenomenon has been noted by Lee (2008) based on observations made on Taiwan STM. I provide expressions (40)-(42) to illustrate this phenomenon based on my own fieldwork data (for a related discussion on such a negation, see Section 2.5.1; for more details, also see Section 6.3.4).

JSM

(40) *Hit tiunn tsua gua thiah bo phua.*
 that CLF paper I tear NEG be.broken
 ‘That piece of paper, I tore it but it didn’t become broken.’
 00:04:01.860 - 00:04:03.230 MT 15-45-VR00031-5-14

(41) *Gua hit tiunn tsua thiah bo phua*
 I that CLF paper tear NEG be.broken
 ‘That piece of paper, I tore it but it didn’t become broken.’
 00:03:19.570 - 00:03:21.030 MT 15-45-VR00031-5-14

(42) **Gua thiah bo phua hit tiunn tsua.*

I tear NEG be.broken that CLF paper

Intended: 'That piece of paper, I tore it but it didn't become broken.'

3.3.2.7 Passive marker *khih* 'lit. give'

There are five passive markers in JSM: *khih* 'lit. give', *tho* 'lit. give', *tng*, *ho* and *hainn* (Lin 2009, 195-210, 2015). The one that is frequently used in JSM and is adopted in my diagnostics is *khih* 'lit. give', the use of which is introduced in this section. In (43), the undergoer argument *kue a* 'chicken' is promoted to the position before the passive marker *khih*.

JSM

(43) *Kue a khih kau ka si.*

little.chicken PASS dog bite die

'The little chicken was/were bitten dead by the dog.'

(Lin 2009, 198)

Cross-linguistically, the passive expression is expected to express the affectedness of the undergoer (the surface subject) regardless of adversative or positive affectedness (Shibatani 1985, 841, 1988, Abraham and Leisiö 2006, Keenan and Dryer 2007, 341-342). However, usually, affectedness expressed by the JSM *khih* passive is adversative. For example, (43) is formed based on a Cause-Effect SVC, in which the result specified in the event is that the chicken is dead. JSM also uses the phasal marker *khi* 'go' with the verb in a *khih* passive to indicate a result. This result is usually adversative and undesired (Li 1996/2007, 3). An example is provided in (44). Some other examples provided in Li (1996/2007, 3) that contain the phasal marker are *phai khi* 'become bad', *tshau khi* 'become stinky' and *phua khi* 'become broken'. One may not say **ho khi* 'become good' or **sui khi* 'become pretty' with such a marker.

JSM

(44) *Phinko kkih gua tsiah khi.*

apple PASS I eat go

‘The apple was eaten by me.’

(Lin 2009, 197)

PART TWO Nuclear Serial Verb Constructions

In part I, I discuss two semantic sub-types of nuclear SVCs in MC and JSM. The first sub-type is the Cause-Effect SVC (Ch. 4); the second sub-type is the Manner-Motion SVC (Ch. 5). Unlike the bi-clausal structures, each of the two sub-types of nuclear SVC exhibits the monoclausality with regard to the inter-clausal diagnostics (Sections 4.2 and 5.2). Moreover, serial verbs of the two sub-types of nuclear SVC act on a par with a simple predicate with regard to the intra-clausal diagnostics (Sections 4.3 and 5.3).

Chapter Four: Cause-Effect Serial Verb Construction

4.1 Sub-types of the Cause-Effect Serial Verb Construction

This chapter introduces the cross-linguistically widely attested Cause-Effect (C-E hereafter) SVC⁶⁷ in both MC and STM. It focuses on how this type of the SVC behaves with regard to the intra-clausal diagnostics. In the C-E SVC, V1 denotes a causing event and V2 denotes the effect that is caused by V1. For example, in (1), the hitting action denoted by V1 *da* ‘hit’ causes the effect that the fly which was hit has become dead, as denoted by V2 *si* ‘die’. Expressions of the C-E SVC are divided into five sub-types primarily in terms of the transitivity of component verbs.⁶⁸ Note that MC and JSM differ in the range of expressions that they allow as the C-E SVC: for example, the last sub-type which contains two ditransitive verbs in the nuclear SVC is only observed in MC.

a. Transitive V1 and intransitive V2

Expressions of this sub-type of nuclear SVC are commonly observed in MC and JSM, such as *xi ganjing* ‘wash be.clean’ (MC), *tshih tshingkhi* ‘wipe be.clean’ (JSM), *tsi siak* ‘cook be.cooked’ (JSM), *chi bao* ‘eat be.full’ (MC), *da si* ‘hit die’ (MC) and *thiah phua* ‘tear be.broken’ (JSM). In terms of the argument realisation pattern (and/or semantic orientation of V2), this sub-type can further be broken down into two sub-types: in the first sub-type, the undergoer argument of V1 is the sole argument of V2, as shown in (1) and (3); in the second sub-type, the actor argument of V1 is the sole argument of V2,

⁶⁷ The C-E SVC in this chapter is referred to as *Dongjie shi*, the “resultative construction”, in Chinese grammar (e.g., Jiang and Cao 2005, 305) or *Shicheng shi*, the “causative form [construction]” (Wang 1980, 403). I adopt the term C-E SVC in order to distinguish the nuclear SVC with a clear cause-effect meaning from the core SVC that indicates a similar meaning (see Ch. 6 the Resultative SVC).

⁶⁸ This division based on the transitivity of individual verbs does not mean that transitivity of each verb plays a significant role in the SVC structure, as I have argued in Sections 2.6.3-4 that the two verbs in a nuclear SVC have merged into a single predicate via predicate fusion. This division is basically conducted for a comparison of the sub-types between the C-E SVC (current chapter) and the Resultative SVC (Ch. 6). As I will show, some serial verbs may occur either in some sub-types of the C-E SVC or some sub-types of the Resultative SVC.

such as *chi bao* ‘eat be.full’ in (2). Note that there are only a few members of the second sub-type. In addition, expressions of the second sub-type in MC and JSM display some distinct characteristics, which receive a more detailed discussion in Section 11.2.2.

MC

(1) *Wo da si le cangying.*
 I hit die PFV fly
 ‘I hit the fly dead.’ or ‘I killed the fly.’

(2) *Wo chi bao le fan.*⁶⁹
 I eat be.full PFV meal
 ‘I am full by eating a meal.’

JSM

(3) *I thiah phua hit tiunn tsua lo.*
 3SG tear be.broken that CLF paper DM
 ‘S/he tore that piece of paper apart.’

00:38:51.440 - 00:38:53.550

B15-31 VR0001 29-4-14

b. Transitive V1 and transitive V2

In expressions of this sub-type, the actor argument of V1 is the actor of V2 at the semantic level of argument structure. The undergoer argument of V1 is also the undergoer of V2 at the semantic level of argument structure. There are not many expressions of this sub-type in MC and JSM. The expressions I have examined include *ting dong* ‘listen.to understand’ (MC)⁷⁰, *xue hui* ‘study know’ (MC) and *o e (hiaulit)* ‘study know’ (JSM). I illustrate this group with the combination ‘study-know’ in both varieties for the sake of consistency of testing and comparison.

⁶⁹ For its JSM equivalent, see a discussion in Section 11.2.2.

⁷⁰ The JSM equivalent of this expression is *thiann u* ‘lit. listen.to have’. The post-verbal *u* ‘lit. have’ is argued to denote aspectual information in STM; see Yang (2014b) and Wang (2015), amongst others. Also see Ch.4 Section 3.6 in Lin (2009) for the semantic meaning of expressions of V-*u* construction in JSM.

MC

- (4) *Wo xue hui youyong le.*
I study know swimming PFV
'I have learned swimming.'

JSM

- (5) *Gua o ehiau suehiak lo.*
I study know swimming DM
'I have learned swimming.'
00:11:36.795 - 00:11:40.255 LTS 35-37 26-4-14

c. Intransitive V1 and intransitive V2

This sub-type of the C-E SVC consists of two intransitive verbs. It can be broken down further into two sub-types. One sub-type takes an object in the construction; the other does not. In the first sub-type, the semantic argument of V1 is realised as the subject in the SVC, while the semantic argument of V2 is realised as the object in the SVC. Expressions in this sub-type include *pao tong* 'run be.threadbare' (MC), *sau tsih* 'blow be.broken' (JSM), *ku xia* 'cry be.blind'(MC) and *khau tam* 'cry be.wet' (JSM). All of the above expressions behave in the same way with regard to the diagnostics. I illustrate their behaviours with the combination 'cry be.wet' in both varieties, as shown in (6) and (7).

MC

- (6) *Lisi ku shi le shoupa*
PN cry be.wet PFV handkerchief
'Lisi got the handkerchief wet by crying on it.'

JSM

- (7) *I khau tam tshiukun a*
3SG cry be.wet handkerchief
'S/he got the handkerchief wet by crying on it.'

The other sub-type that does not have any object argument is observed in both MC and JSM. The semantic argument of V1 is identical to the semantic argument of V2. This argument is realised as the subject in the SVC. Examples are provided in (8)-(10). Note that the scenario of (9) should be the self-burning of the branches, for example in a forest fire.⁷¹

MC

- (8) *Wo zou lei le.*⁷²
 I walk be.tired PFV
 ‘I got tired by walking.’

- (9) *Shuzhi shao duan le.*
 branch burn be.broken PFV
 ‘The branches burnt and broke off.’

JSM

- (10) *I kh(i)a ia lo*
 3SG stand be.tired DM
 ‘S/he got tired by standing.’

00:01:57.864 - 00:01:59.064 B 01-09 VR00006

d. (Di)transitive V1 and transitive V2

I only observed one verb combination of this sub-type: ‘teach know’. Members of V1 are not commonly observed in either MC⁷³ and JSM. Verbs that can occur in the verb

⁷¹ This scenario should be differentiated from a scenario involving the causative reading of the verb *shao* ‘burn (or cook)’, which involves an agent and an undergoer. In this case, the same surface form in (9) should be interpreted as a transitive SVC with non-occurrence of the agent argument and optional topicalisation of the undergoer argument (i.e., ‘the branches (someone) broke them off by burning’).

⁷² Another expression that behaves similarly to this type of C-E SVC is *shui xing* ‘lit. sleep wake.up or become awake’ (MC) and *khun tshin* ‘lit. sleep wake.up or become awake’ (JSM). However, the semantics of this expression is not Cause-Effect. Rather, it is more properly understood as denoting a type of natural transition of physical state.

⁷³ However, see Zhang (1999) for a Construction Grammar (CxG) account of the verbs that can occur in a

combination of this sub-type are not widespread in both varieties. The original examples construed in MC and JSM are provided in (11) and (12).

MC

- (11) *Ta jiao hui le Lisi youyong.*
3SG teach know PFV PN swimming
'S/he taught Lisi swimming, and Lisi learned it.'

JSM

- (12) *Gua ka ehiau i ueto.*
I teach know 3SG drawing
'I taught him/her drawing, and s/he learned it.'
00:06:35.327 - 00:06:40.137 LTS 46

Note that the verb “teach” is not a typical ditransitive verb in MC⁷⁴, because it is completely grammatical to use this verb with only one object expressed. For example, in (13) the object of the verb is the audience being taught in the teaching event. In (14), the object denotes the content that the actor teaches. However, in (15), both objects are realised after the verb *jiao* ‘teach’. The alignment of the objects is the same as in the SVC shown in (11) and (12): O1 denotes the audience and O2 denotes the knowledge or the content of teaching.

MC

- (13) *Ta jiao daxuesheng.*
3SG teach university.student
'S/he teaches university students.'

- (14) *Ta jiao yuyanxue.*
3SG teach Linguistics

ditransitive construction in MC.

⁷⁴ I do not have sufficient data in JSM concerning the transitivity of the verb *ka* ‘teach’. Presumably, its ability to take one or two objects in JSM does not deviate from the ability of the verb *jiao* ‘teach’ in MC.

‘S/he teaches Linguistics.’

(15) *Ta jiao daxuesheng yuyanxue*

3SG teach university.student Linguistics

‘S/he teaches Linguistics to university students.’

e. Ditransitive V1 and ditransitive V2

Two ditransitive verbs are involved in the expression of this sub-type. It is hard to identify ditransitive verbs in MC and, JSM in particular, and I only include one expression in this sub-type. The expression I adopt for the diagnostics is *song*⁷⁵ *gei* ‘send give’ in MC, as shown in (16). O1 is the recipient argument. O2 is the theme. Its JSM equivalent of a nuclear SVC is not observed. (see a JSM semantic equivalent expressed in a core SVC in Ch. 6.)

MC

(16) *Wo song gei ta na ben shu.*

I send give 3SG that CLF book

‘I sent him/her a book.’

This chapter is structured as follows: in Section 4.2, I will show that all the sub-types of the C-E SVC basically behave in the same way with regard to the inter-clausal diagnostics. In Section 4.3, I will show that the C-E SVC forms via predicate fusion. The complex nucleus formed by merging the component verbs functions as a single verb with regard to the intra-clausal diagnostics.

⁷⁵ The verb *song* ‘send’ in MC may be an ambi-ditransitive verb. It may function as a ditransitive verb, i.e., it takes three unmarked arguments, including a sender, a recipient and an item. For example, *wo song Lisi yi ben shu* ‘lit. I send Lisi a book’. The verb *song* ‘send’ may take only two arguments, i.e., a sender and an item; For example, *ta song xin* ‘lit. s/he send letter’.

4.2 Inter-clausal diagnostics

This section consists of two parts: passivisation of the object of V2 and the other diagnostics. The structure is arranged in this way for the reason that with regard to the diagnostic of passivisation of the object of V2, some sub-types of the C-E SVC may behave differently from the other groups slightly. With regard to the other inter-clausal diagnostics, all the sub-types behave in a very similar way.

4.2.1 Passivisation of the object of V2

Note that, since the component verbs have merged into a single predicate, the object arguments realised are the object arguments of the single predicate. That is, there is no such issue as to whether a given object in the C-E SVC only belongs to V2 but not V1 (also see Section 2.7.2.1 for a related discussion).

Basically, the object argument that occurs in the first three sub-types of the C-E SVC is the object argument of the predicate that forms by merging two component verbs. Therefore, it can be passivised. Examples (17) and (18) illustrate passivisation of the object argument in expressions (1) and (3) respectively.

MC

(17) *Cangying bei wo da si le.*

fly PASS I hit die PFV

'The fly was hit dead by me.' or 'The fly was killed by me.'

JSM

(18) *Hit tiunn tsua khih gua thiah phua.*

that CLF paper PASS I tear be.broken

'That piece of paper was torn apart by me.'

An exception may be the MC expression (2) (the second sub-type) that the argument *fan* ‘meal’ cannot be passivised. The reason may be that the argument is not an argument of V2 in the expression *chi bao* ‘eat be.full’, and it is not a genuine undergoer argument in the event denoted by the SVC (See a detailed discussion in Section 11.2.2).

For a C-E SVC where there are two object arguments, its status of a monoclausal structure is evident as long as one object can be passivised. Expressions (19)-(22) show that O1 is passivisable in the verb combination of *jiao hui* ‘teach-know’ (MC) or *ka ehiau* ‘teach know’ (JSM), in contrast with O2. This might be due to the affectedness of O1 that a person changes from the state of not knowing new knowledge to the state of knowing it, contrasting with O2 which denotes the skills that are hardly considered to be affected in the event.

MC

(19) *Lisi bei ta jiao hui le youyong.*

PN PASS 3SG teach know PFV swimming.

‘Lisi was taught swimming by him/her, and Lisi learned it.’

(20) **Youyong bei ta jiao hui le Lisi.*

swimming PASS 3SG teach know PFV PN

Intended: ‘Swimming was taught to Lisi by him.’

JSM

(21) *Sionsiong kih gua ka ehiau kiannki.*

PN PASS I teach know chess.playing

‘Sionsiong was taught chess by me.’

- (22) **Kiannki khh gua ka ehiau Sionsiong.*
 chess.playing PASS I teach know PN
 Intended: ‘Chess was taught to Sionsiong by me.’

In the sub-type where there are two ditransitive verbs in the C-E SVC (the sub-type only found in MC), only O2 is passivisable, in contrast to O1. This is shown in (23) and (24).

MC

- (23) *Na ben shu bei wo song gei ta le.*
 that CLF book PASS I send give 3SG PFV
 ‘That book was sent to him/her by me.’

- (24) **Ta bei wo song gei na ben shu le.*
 3SG PASS I send give that CLF book PFV
 Intended: ‘S/he was sent that book by me.’

It seems that such a pattern of passivising object(s) is inherited from the pattern of passivising object(s) of a single ditransitive verb. Note that O1 (recipient) of a ditransitive verb, such as *song* ‘send’ and *gei* ‘give’, is generally not passivisable in MC, as opposed to O2 (theme), as shown in (25)-(27).

MC

- (25) *Wo song/gei le Lisi na ben shu.*
 I send/give PFV PN that CLF book
 ‘I sent/gave Lisi that book.’

- (26) **Lisi bei wo song/gei le na ben shu.*
 PN PASS I send/give PFV that CLF book
 Intended: ‘Lisi was sent/given that book by me.’

- (27) *Na ben shu bei wo song/gei le Lisi.*
 that CLF book PASS I send/give PFV Lisi
 ‘That book was sent/given to Lisi by me.’

The passivisation pattern of the objects of the above ditransitive verbs in MC contrasts with that of the ditransitive verb *give* in English (see Hudson (1992)). In particular, the recipient argument in a typical English ditransitive expression is passivisable, as shown in (28), as opposed to the recipient argument in (26).

- (28) Bill was given a present.
 (Hudson 1992, 256)

Note that this passivisation diagnostic may not be applicable to expressions of the C-E SVC where there is no object, such as (8) and (9). However, these expressions behave in the same way as other expressions of the C-E SVC with regard to other inter-clausal diagnostics.

4.2.2 Other inter-clausal diagnostics

The C-E SVC does not allow independent pre-V2 negation, independent modification of V2 by a temporal adverbial, independent marking of viewpoint aspect on V2 or independent modification of V2 by a manner adverbial. Expressions (29)-(36) in MC and JSM are constructed on the basis of the original examples in (1) and (3). The other sub-types of the C-E SVC (including the expressions that do not have any object⁷⁶) behave in the same way with regard to these tests and I do not repeat them here.

⁷⁶ An example as such is provided in (1) in the footnote.
 (1) **Shuzhi shao mei/xianzai/zai/manmande duan.*
 branch burn NEG/now/PROG/slowly break

MC

(29) **Wo da mei si cangying.*

I hit NEG die fly

Intended: 'I have hit the fly. But it didn't die.'

(30) **Wo da xianzai si cangying.*

I hit now die fly

Intended: 'I hit the fly (just now). It is now dead.'

(31) **Wo da zai si cangying.*

I hit PROG die fly

Intended: 'I have hit the fly. It is dying.'

(32) **Wo da manmande si cangying.*

I hit slowly die fly

Intended: 'I hit the fly. It is dying slowly.'

JSM

(33) **Gua thiah bo phua hit tiunn tsua.*⁷⁷

I tear NEG be.broken that CLF paper

Intended: 'I have torn the piece of paper. But it didn't become broken.'

(34) **Gua thiah tsittsun phua hit tiunn tsua.*

I tear now be.broken that CLF paper

Intended: 'I tore the piece of paper. It is now broken.'

(35) **Gua thiah leh phua hit tiunn tsua.*

I tear PROG be.broken that CLF paper

Intended: 'I tore the piece of paper. It is breaking.'

⁷⁷ Note that in Ch. 6, there is a sub-type of core SVC in JSM which is superficially similar to the expression in (33), but behaves differently with regard to the intra-clausal diagnostics.

- (36) **Gua thiah banban a phua hit tiunn tsua.*
I tear slowly be.broken that CLF paper
Intended: ‘I tore the piece of paper. It becomes broken slowly.’

Moreover, evidence with regard to the prosodic diagnostic also shows that V1 obligatorily undergoes tone sandhi once the sandhi condition is fulfilled in the verb combination of the C-E SVC. Examples of tone sandhi in the C-E SVC have been discussed in Section 2.5.6 and are not repeated here. Note also that the diagnostic of extraction (the CSC, for details, see Section 2.5.7) does not apply here.

From the above discussion, it can be seen clearly that with regard to the inter-clausal diagnostics, all the sub-types of the C-E SVC exhibit monoclausal status. We will now turn to demonstrating that they are formed at the nuclear rather than the core level.

4.3 Intra-clausal diagnostics

With regard to the intra-clausal diagnostics, the C-E SVC exhibits a tight structure. Via predicate fusion, the component verbs have fused into a single predicate and they function as a single verb in terms of not allowing component verbs to be separated by inserting intervening material in between or coordinating a component verb independently from the other verb. The undergoer argument of the C-E SVC only undergoes topicalisation optionally.

4.3.1 Passivisation of O1

This diagnostic does not apply to the C-E SVC. As I have argued in Sections 2.4, 2.6.3-4 and 2.7.2.1, since the component verbs in nuclear SVCs have fused into a single predicate, there is no such issue as to whether a particular realised object argument of a nuclear SVC belongs to V1 or V2. All the realised object arguments of a nuclear SVC

belong to the fused nucleus in the SVC.

4.3.2 Insertion of intervening material

It is not acceptable to insert any intervening material between component verbs of the C-E SVC while satisfying the two requirements that I propose in Section 2.7.2.2. The five sub-types of the C-E SVCs behave in the same way with regard to this diagnostic.

4.3.2.1 Transitive V1 and intransitive V2

As shown in (37)-(39), neither can the serial verbs of the C-E SVC be separated by inserting an adverb denoting a temporal interval between the serial verbs, such as *mashang* ‘immediately’ (MC), nor can they be separated by inserting a degree adverb, such as *ia* ‘very’ (JSM), between the serial verbs.

MC

(37) **Wo da mashang si haichong*

I hit immediately die pest

Intended: ‘I hit the pest. It died immediately.’

(38) **Wo chi like bao le fan.*

I eat immediately be.full PFV meal

Intended: ‘I ate the meal. I became full immediately.’

JSM

(39) **Gua thiah ia phua⁷⁸ hit tiunn tsua.*

I tear very broken that CLF paper

Intended: ‘I tore the piece of paper. It became ragged.’

⁷⁸ I have consulted with native speakers of JSM, and *ia phua* ‘very broken’ as an expression on its own is acceptable in JSM.

4.3.2.2 Transitive V1 and transitive V2

Similarly, nothing can occur between the nuclear serial verbs of this sub-type. Given the semantics of the serial verbs, I test them with the temporal adverb *like* ‘immediately’ (MC) or *suisui* ‘immediately’ (JSM). Neither (40) nor (41) are grammatical.

MC

- (40) **Wo xue like hui youyong le.*
I study immediately know swimming PFV
Intended: ‘I have learned swimming immediately.’

JSM

- (41) **Gua o suisui e(hiau) suehiak lo.*
I study immediately know swimming PFV
Intended: ‘I have learned swimming immediately.’

4.3.2.3 Intransitive V1 and Intransitive V2

In the same vein, the serial verbs of this sub-type cannot be separated from each other by inserting intervening material in between. For example, inserting a degree adverb ‘too’ is not acceptable in either variety.

MC

- (42) **Lisi ku tai shi le shoupa.*
PN cry too be.wet PFV handkerchief
Intended: ‘Lisi cried on the handkerchief and got it too wet.’

JSM

- (43) **I khau siunn tam tshiukun a*
3SG cry too be.wet handkerchief
Intended: ‘S/he cried on the handkerchief and got it too wet.’

Furthermore, expressions (8) and (9) do not allow insertion of an intensifier between the serial verbs either. I exemplify the ungrammaticality of inserting a degree adverb, *tai* ‘too’ or *hen* ‘very’, between the serial verbs on the basis of (8) in (44). The serial verbs in (9) (*shao duan* ‘burn break’ in MC) behave in the same way; I do not repeat the test result.

MC

- (44) **Ta zou tai/hen lei le.*⁷⁹
 3SG walk too/very be.tired PFV
 Intended: ‘S/he got too/very tired by walking.’

Note that the JSM expression (10) of the C-E SVC does not accept insertion of the intensifier *siunn* ‘too’ or *ia* ‘very’. Nevertheless, the same string of verbs in JSM may occur in a core SVC whereby such a degree adverb must occur between the component verbs (i.e., the Resultative SVC; see Ch. 6, Section 6.3.2).

4.3.2.4 (Di)transitive V1 and transitive V2

Given the semantics of the component verb(s) (in particular, the stative verb V2 ‘know’), I adopt the temporal adverb ‘immediately’ in the diagnostic. It can be seen that the temporal adverb cannot occur between the verbs.

MC

- (45) **Wo jiao like hui le ta youyong.*
 I teach immediately know PFV 3SG swimming
 Intended: ‘I taught him/her swimming. S/he immediately learned it.’

⁷⁹ A native speaker of MC told me that when the intensifier is *tai* ‘too’ in this case, the expression seems acceptable, while other speakers of MC correct this resulting expression with a bi-clausal structure with the subordinate clause marker *de*, as in *zou de tai lei le* ‘lit. walk SUBORD too tired’. I myself also find the intensifier between the serial verbs to be unacceptable. This ungrammaticality can be particularly observed with the intensifier of *hen* ‘very’, as shown in the example.

JSM

(constructed)

(46) **Gua ka suisui ehiau Sionsiong kiannki.*

I teach immediately know PN chess.playing

Intended: 'I taught Sionsiong chess. He immediately learned it.'

4.3.2.5 Ditransitive V1 and ditransitive V2

As can be seen in (47), the adverb *manmande* 'slowly' or *like* 'immediately' cannot be inserted between the component verbs of this sub-type of C-E SVC.

MC

(47) **Wo song manmande/like gei ta na ben shu.*

I send slowly/immediately give 3SG that CLF book

Intended: 'I sent the book. I gave him/her the book slowly/immediately.'

4.3.3 Coordination within the SVC

4.3.3.1 Transitive V1 and intransitive V2

Neither V1 nor V2 can be coordinated independently from the other verb in the C-E SVC. I exemplify the ungrammaticality of doing so in (48)-(50).

MC

(48) **Wo da si he bian le cangying.*

I hit die and be.flat PFV fly

Intended: 'I hit the fly dead and flat.'

(49) **Wo chi bao he cheng le fan.*

I eat be.full and be. stuffed PFV meal

Intended: 'I got full and stuffed by eating meal.'

JSM

- (50) **Hit tiunn tsua gua thiah phua kap phai lo.*
that CLF paper I tear be.broken and be.bad DM
Intended: ‘*That piece of paper, I tore it apart and broken now.’

4.3.3.2 Transitive V1 and transitive V2

In MC, to independently coordinate V2 in the C-E SVC is not grammatical. Still, expression (51) can be understood as a bi-clausal structure denoting two unrelated events, as can be seen in the translation (b.). Expression (52) in JSM, which is also intended to coordinate V2 in the SVC, is completely unacceptable according to my consultants.

MC

- (51) *Wo xue hui youyong hai dong le youhua.*
I study know swimming and understand PFV oil painting
*a. Intended: ‘I studied swimming and oil painting and learned them.’ (SVC)
b. ‘I have learned swimming and have understood the oil painting.’ (bi-clausal)

JSM

- (52) **Gua o ehiau iouing⁸⁰ kap ehiau tshiunnkua.*
I study know swimming and know singing
Intended: ‘I have learned swimming and singing.’

4.3.3.3 Intransitive V1 and intransitive V2

Similarly, this sub-type of the C-E SVC does not allow coordination within the SVC. Expressions (53) and (54) show the ungrammaticality of coordinating V2 and the object argument in the SVC. It is not acceptable for the expressions to be interpreted as a bi-clausal structure either.

⁸⁰ Both expressions *iouing* and *suehiak* mean swimming in JSM. They are used interchangeably by native speakers of JSM.

MC

(53) **Wo ku shi le shoupa bingqie hong le yanjing.*

I cry be.wet PFV handkerchief and be.red PFV eye

Intended: 'I cried so hard that the handkerchief got wet and the eyes got red.'

JSM

(54) **I khau tam tsimthau (kap) ang maktsiu.*

3SG cry be.wet pillow and be.red eye

Intended: 'S/he cried so hard that the pillow got wet and the eyes became red.'

Likewise, expressions (8), (9) and (10), which do not have an object, behave in the same way of disallowing V2 to be coordinated within the SVC. It is also not possible to interpret the resulting expressions (55) and (56) as a bi-clausal structure.

MC

(55) **Wo zou lei erqie kun le.*

I walk be.tired and be.sleepy PFV

Intended: 'I walked so that I got tired and sleepy.'

JSM

(56) **Gua kha ia kap aikhun lo.*

I stand be.tired and want.sleep DM

Intended: 'I got tired and sleepy after standing.'

4.3.3.4 (Di)transitive V1 and transitive V2

V2 and the objects in this sub-type of the C-E SVC cannot be coordinated either. This is shown in (57) and (58).

MC

(57) **Wo jiao hui le Lisi huahua erqie dong*

I teach know PFV PN drawing and understand

le Wangwu youyong.

PFV PN swimming

Intended: 'I taught Lisi drawing. He learned it. (I also taught Wangwu swimming,) and Wangwu learned it.'

JSM

(58) **Gua ka ehiau Sionsiong ueto kap ehiau Ahim suehiak.*

I teach know PN drawing and know PN swimming

Intended: 'I taught Sionsiong drawing. He learned it. (I also taught Ahim swimming.) Ahim learned it.'

4.3.3.5 Ditransitive V1 and ditransitive V2

V2 and the objects in this sub-type of the C-E SVC do not coordinate within the SVC. Expression (59) can only have an acceptable interpretation in the bi-clausal structure (b.), which denotes two distinct events.

MC

(59) *Wo song gei ta na ben shu bingqie gei*

I send give 3SG that CLF book and give

Lisi yi ping xiangshui.

PN one CLF perfume

*a. Intended: 'I sent him/her that book and Lisi a bottle of perfume.' (SVC)

b. 'I sent him/her that book. And I gave Lisi a bottle of perfume.' (bi-clausal)

4.3.4 Obligatory topicalisation of the undergoer argument(s)

There is no obligatory topicalisation of the undergoer argument observed in the five sub-types of C-E SVC in both MC and JSM. As I have shown in the expressions in Section 4.1, expressions the five sub-types of C-E SVC all occur in the SVV(OO)

surface form. Some of these objects can only undergo optional topicalisation.

4.3.4.1 Expressions with only one object

The first three sub-types of the C-E SVC contain only one object. This object is optionally topicalised. It can be topicalised either before the subject, such as (60), (62) and (64), or immediately after it, such as (61), (63) and (65) .

MC

(60) *Cangying, wo da si le.*

fly I hit die PFV

‘The fly, I hit it dead.’

(61) *Wo cangying da si le (, wenzi hai mei).*

I fly hit die PFV mosquito yet not

‘I hit the FLY dead, ((but) the MOSQUITO, I have not yet (hit dead)).’

(62) *Fan wo chi bao le⁸¹.*

meal I eat be.full PFV

‘The meal, I got full after it.’

(63) *Wo fan chi bao le.*

I meal eat be.full PFV

‘The meal, I got full after it.’

⁸¹ Note that the topic position before the subject does not seem to be available for the argument *jiu* ‘liquor’ in a similar expression *he zui* ‘drink be.drunk’ in MC as shown below. I found no hits for such an expression via Google or the Chinese online search engine *Baidu*.

(1) *Wo he zui le jiu.*
I drink be.drunk PFV liquor
‘I got drunk by drinking liquor.’

(2) *Wo jiu he zui le.*
I liquor drink be.drunk PFV
‘The liquor, I got drunk by drinking it.’

(3)**Jiu wo he zui le.*
liquor I drink be.drunk PFV

JSM

- (64) *Hit tiunn tsua i thiah phua lo*
that CLF paper 3SG tear be.broken DM
'That piece of paper, s/he has torn it apart.'

00:39:20.600 - 00:39:22.300 B 15-31 VR0001 29-4-14

- (65) *I tsimthau khau tam.*
3SG pillow cry be.wet
'The pillow got wet as s/he cried so hard on it.'

00:26:10.195 - 00:26:12.275 MT 5-8

4.3.4.2 Expressions with two objects

The last two sub-types of the C-E SVC take two object arguments. I will show that in each sub-type, either object may undergo optional topicalisation.

4.3.4.2.1 (Di)transitive V1 and transitive V2

Either O1 or O2 can be topicalised in MC expressions of this sub-type, as shown in (66) and (67). O2 in the JSM example (69) however cannot be topicalised, as opposed to O1 ((68)). Its behaviour may be due to a lack of proper context when I elicited the data, for its MC counterpart (67) is grammatical. I only obtained data in JSM that have a negative polarity in the expressions, but this does not mean that the expressions would behave differently in their affirmative counterparts in this respect.

MC

- (66) *Lisi wo jiao hui le xiaqi.*
PN I teach know PFV chess.playing
'Lisi, I taught him chess, and he learned it.'

- (67) *Xiaqi wo jiao hui le Lisi.*
chess.playing I teach know PFV PN
'The chess, I taught Lisi, and he learned it.'

JSM

(68) *Sionsiong gua bo ka ehiau kiannki.*

PN I NEG teach know chess.playing

‘Sionsiong, I didn’t teach him and let him know chess.’

00:35:36.527 - 00:35:38.457 MT 36-47 140610-03 11-5-14

(69) *??Kiannki gua bo ka ehiau Sionsiong.*

chess.playing I NEG teach know PN

Intended: ‘As to the chess, I didn’t teach Sionsiong and let him know that.’

4.3.4.2.2 Ditransitive V1 and ditransitive V2

In this sub-type, O1 (the recipient) cannot be moved out from its original position in the expression, as shown in (70). In contrast, O2 (the theme) is optionally topicalisable, as shown in (71). It seems that the nuclear SVC that forms on the basis of the two ditransitive verbs *song* ‘send’ and *gei* ‘give’ has derived a particular characteristic that requires O1 to stay in situ.⁸²

MC

(70) **Na ge ren, wo song gei zhe ben shu.*

that CLF person I send give this CLF book

Intended: ‘That person, I sent (him/her) this book.’

(71) *Zhe ben shu, wo song gei na ge ren.*

this CLF book I send give that CLF person

‘This book I sent (it to) that person.’

⁸² Note that the topicalisation pattern of the SVC differs from the one with a single ditransitive verb on its own. Either O1 or O2 can be topicalised with a single ditransitive verb *song* ‘send’ or *gei* ‘give’:

MC

(1) *Na ge ren, wo song/gei zhe ben shu.*
that CLF person I send/give this CLF book
‘That person, I sent/give (him/her) this book.’

(2) *Zhe ben shu, wo song/gei na ge ren.*
this CLF book I send/give that CLF person
‘This book, I sent/gave (it to) that person.’

The exact status of *gei* ‘give’ in this sub-type of SVC is by no means uncontroversial. The verb *gei* ‘give’ is considered as a coverb in several studies, for example, Li and Thompson (1989, 365-368) and Bisang (1995, 150, forthcoming-b). In Chinese grammar, coverbs are those grammatical elements that can function as prepositions while retaining their verbal properties at other occasions.

There are pros and cons of considering *gei* ‘give’ a coverb. If *gei* ‘give’ is analysed as a coverb, it can naturally count for the fact that only V1 *song* ‘send’ is copied in A-not-A question, not the V-*gei* sequence. For example, one may say *ni song bu song gei ta shu?* ‘lit. you send-not-send give him/her the book’, but not **ni song gei bu song gei ta shu?* ‘lit. you send-give-not-send-give him/her the book?’⁸³. Meanwhile, it should be noticed that the verbal status of *gei* ‘give’ is still retained in this sub-type of C-E SVC, as the perfective aspectual marker *le* can occur after V2 *gei* ‘give’ forming *song gei le* ‘send give PFV’, which is not possible with a preposition in MC, for example **cong le...* ‘from PFV...’. In addition, the analysis of *gei* ‘give’ in *song gei* ‘send give’ sequence as a coverb poses a further question that since the verbal counterpart of *gei* ‘give’ is ditransitive and takes two objects on its own, it is expected that its coverb counterpart does not allow either object argument of it to be extracted. It is however not true, as only O1 in the verbal sequence is not allowed to be extracted in contrast to its O2, as shown in (70) and (71). In this study, since I do not assume any change of semantic specification of a particular verb in and outside the SVC (see Ch. 1 and Section 2.3), I still consider *gei* ‘give’ a full serial verb in the ditransitive SVC.

4.4 Summary

This chapter discusses the syntactic and semantic characteristics of a semantic sub-type of nuclear SVC: the Cause-Effect SVC (the C-E SVC). I have shown that expressions of

⁸³ Also note that whether A-not-A question can be considered as an intra-clausal diagnostic is not clear. It is only acceptable to copy V1 in A-not-A question rather than the entire verb sequence *song gei* ‘send give’. However, it is not acceptable to copy V2 in A-not-A question by saying that **ni song gei bu gei ta shu?* ‘lit. you send give-not-give him/her book?’ attempting to coordinate V2 only.

the C-E SVC type exhibit the monoclausality with regard to the inter-clausal diagnostics. Contrasting with bi-clausal structures, V2 in the C-E SVC does not allow independent negation, independent modification by a temporal adverbial, independent marking of viewpoint aspect, or independent modification by a manner adverbial. Their monoclausality is also shown by their ability of allowing an object to be passivised and the possibility of exhibiting tone sandhi.

With regard to the intra-clausal diagnostics, the C-E SVC exhibits characteristics of a single predicate that forms via predicate fusion. The component verbs of the C-E SVC cannot be separated from each other and the SVC allows objects to undergo optional topicalisation, behaving on a par with a single verb. It is noticed that, in the sub-type that consists of two ditransitive verbs 'send-give', it seems that O1 (the recipient) cannot be topicalised in the same way as O2 (the theme), a phenomenon that is not observed with each component verb on its own. This is considered a characteristic of this particular sub-type of nuclear SVC and deserves more investigation.

Chapter Five: Manner-Motion Serial Verb Construction

5.1 Introduction

The Manner-Motion type of nuclear SVC (hereafter the MSVC) denotes an event in which the subject is the actor who conducts motion in a particular kind of manner towards a particular direction. Unlike in the Cause-Effect SVC, the temporal structure of the sub-events, i.e., motion with a particular kind of manner and moving towards a particular direction, overlaps. Therefore, this type of SVC is treated as a distinct semantic sub-type of nuclear SVC.

Both component verbs in the SVC come from a restricted class. V1 denotes a manner of motion, such as *pao* ‘run’, *tiao* ‘jump’ and *pa* ‘climb’ in MC, which as a single verb only takes one argument. V2 denotes a kind of direction, such as *lai* ‘come’, *qu* ‘go’, *guoqu* ‘lit. cross go’, or *shangqu* ‘lit. ascend go’ in MC, or *khi* ‘go’, *lipkhi* ‘lit. enter go’, *lai* ‘come’, *tolai* ‘lit. return come’ and *tokhi* ‘lit. return go’⁸⁴ in JSM, which on its own may take an actor argument before the verb and optionally a locative argument after the verb. Expressions in both MC and JSM are provided in (1)-(5).

MC

- (1) *Ta pao lai le.*
3SG run come PFV
‘S/he runs (towards the speaker).’

⁸⁴ *Lipkhi* ‘lit. enter go’ in JSM is a compound verb. The morpheme *lip* ‘lit. enter’ cannot stand on its own in a simple clause. One cannot say **I lip tshulai* ‘s/he entered the house’ by using the morpheme *lip* as the predicate in the clause. Likewise, the morpheme *to* ‘lit return’ in *tolai* ‘lit. return come’ and *tokhi* ‘lit. return go’ cannot function as the only predicate in a single clause. Therefore, *tolai* and *tokhi* should also be treated as compound verbs.

(2) *Zhangsan tiao guoqu le.*
PN jump cross.go PFV
'S/he jumped across.'

(3) *Lisi pa shangqu le.*
Lisi climb ascend.go PFV
'Lisi climbed upward.'

JSM

(4) *Siolim kiann lipkhi lo.*
PN walk enter.go DM
'Siolim walked in (away from the speaker.)'
00:02:46.032 - 00:02:47.392 MF 42 102013

(5) *I tsau khi banglei lo.*
3SG run go room.inside DM
'S/he ran into the room.'
00:11:56.120 - 00:11:57.990 MF 42 102013

In this chapter, I will show that with regard to the inter-clausal diagnostics, the MSVC exhibits the monoclausality. With regard to the intra-clausal diagnostics, the MSVC exhibits the characteristic of nuclear SVC: the two verbs form a tight unit and they cannot be separated from each other.

5.2 Inter-clausal diagnostics

Since both component verbs are intransitive and there is only one argument in the MSVC, two inter-clausal diagnostics do not apply: passivisation of the object of V2 and the CSC (or extraction).

V2 in this type of nuclear SVC does not allow independent negation, independent modification by a temporal adverbial or manner adverbial, or independent marking of viewpoint aspect. I will show the ungrammaticality of forcing an independent modification or marking of V2 in the MSVC in the inter-clausal diagnostics on the basis of (3) and (4). The other expressions behave in the same way and I do not illustrate them here.

As shown in (6)-(9), V2s in the MSVC in MC do not accept the aforementioned independent operations. None of the resulting expressions can have a bi-clausal interpretation either.

MC

(6) **Lisi pa mei shangqu.*

PN climb NEG ascend.go

Intended: 'Lisi climbed but he didn't climb up.'

(7) **Lisi pa gangcai shangqu le.*

PN climb just.now ascend.go PFV

Intended: 'Lisi climbed, and just now he climbed up.'

(8) **Lisi pa manmande shangqu le.*

PN climb slowly ascend.go PFV

Intended: 'Lisi climbed, and he moved up slowly.'

(9) **Lisi pa zhengzai shangqu.*

PN climb PROG ascend.go

Intended: 'Lisi climbs, and he is now moving up.'

Likewise, the JSM expression of MSVC does not allow its component verb(s) to be independently negated, as shown in (10). Moreover, V2 in the MSVC cannot be

separately modified by a distinct temporal or manner adverbial, as shown in (11) and (12), or to take a distinct viewpoint aspect independently, as shown in (13). The other expressions of MSVC in JSM behave in the same way, and I do not list them here.

JSM

(constructed)

(10) **Siolim bo kiann bo lipkhi*⁸⁵.

PN NEG walk NEG enter.go

Intended: ‘Siolim didn’t walk, and he didn’t go in.’

(11) **Siolim kiann tshinma lipkhi lo*.

PN walk just.now enter.go DM

Intended: ‘Siolim walked, and just now he went in.’

(12) **Siolim kiann banban a lipkhi lo*.

PN walk slowly enter.go DM

Intended: ‘Siolim walked, and he slowly went in.’

(13) **Siolim kiann leh lipkhi lo*.

PN walk PROG enter.go DM

Intended: ‘Siolim walked, and is/was going in.’

As for the prosodic structure in the MSVC, when the tone sandhi condition is met, V1 undergoes obligatory tonal change. For example, V1 *kiann* ‘walk’ in the expression

⁸⁵ Note that there is an expression with the negative marker *bo* ‘not’ only occurring before V2, as shown in (1) below. However, as I have argued in Section 2.5.1, this pre-V2 negation in JSM SVC is not an example of independent negation in a bi-clausal structure, as V1 cannot be separately negated, as shown in (10) in the main text.

JSM

(1) *Siolim kiann bo lipkhi*.

PN walk NEG enter.go

‘Siolim walked, but he didn’t go in.’

This is an example of the phenomenon that the same string of verbs that occur in a nuclear SVC can occur in a core SVC. It is the only expression that I have obtained for this semantic sub-type of core SVC, and more data is needed to discuss the phenomenon in an individual chapter.

kiann lipkhi ‘lit. walk enter.go’ (JSM) in (4) undergoes the tonal change from 24 tone to 22 tone (see a discussion on the diagnostic of prosodic structure in Section 2.5.6). Moreover, compared to the pause probabilities in the clausal juxtaposition, it is highly unlikely that a native speaker of MC or JSM employs a prosodic break between the component verbs in the MSVC.

5.3 Intra-clausal diagnostics

Two intra-clausal diagnostics do not apply here: Passivisation of O1 and obligatory topicalisation of the undergoer argument. There is no object argument in this type of nuclear SVC. Therefore, passivisation of O1 does not apply. Moreover, there is no apparent undergoer argument, as the subject is the actor which conducts a self-propelled motion with a particular manner towards a particular direction. Consequently, no obligatory topicalisation of an undergoer argument is involved in the MSVC.

Two diagnostics that directly apply to this type of SVC are insertion of intervening material and coordination within the SVC. As shown in the resulting expressions (14) and (15), the MSVC does not allow any intervening material, such as the temporal adverb ‘immediately’ (or manner adverbs, see (8) and (12)), to occur between the verbs.

MC

(14) **Lisi pa like shangqu le.*

PN climb immediately ascend.go PFV

Intended: ‘Lisi climbed so that he moved upward immediately.’

JSM

(15) **Siolim kiann suisui lipkhi lo.*

PN walk immediately/quickly enter.go DM

Intended: ‘Siolim walked so that he went in immediately.’

The MSVC prohibits a component verb to be coordinated independently from the other verb within the SVC, as shown in (16)-(19). Note that the expression in (17) can be grammatically interpreted as a bi-clausal structure (interpretation b.), which denotes two distinct events (or two consecutive actions).

MC

(16) **Lisi zou (bingqie) pa shangqu le.*

PN walk and climb ascend.go PFV

Intended: 'Lisi got upwards by walking and climbing.'

(17) *Lisi pa shangqu bingqie guolai le.*

PN climb ascend.go and cross.come PFV

*a. Intended: 'Lisi climbed upwards and towards (the speaker).' (SVC)

b. 'Lisi climbed upwards and he moved towards (the speaker) (probably by walking)' (bi-clausal)

JSM

(constructed)

(18) **Siolim tsau (kap) kiann lipkhi lo.*

PN run and walk enter.go DM

Intended: 'Siolim went in by running and walking.'

(constructed)

(19) **Siolim kiann lipkhi (kap) tolai lo.*

PN walk enter.go and return.come DM

Intended: 'Siolim walked in (away from the speaker) and walked back.' (SVC)

5.4 Summary

In this chapter, I have shown that the MSVC as a semantic sub-type of nuclear SVC

exhibits monoclausal characteristics with regard to the inter-clausal diagnostics (Section 5.2). It does not allow independent negation, independent modification of temporal adverbial and manner adverbial, or independent marking of viewpoint aspect, suggesting its monoclausal structure. Moreover, when the tone sandhi condition is met, V1 obligatorily undergoes a tonal change. With regard to the intra-clausal diagnostics, i.e., insertion of intervening material and coordination within the SVC, the component verbs in the MSVC form a tight structure and they cannot undergo any separation from each other in the SVC.

PART Three Core Serial Verb Constructions

Unlike the nuclear SVCs, a core SVC consists of two separate syntactic argument structures, which share at least one core argument. The two separate argument structures are linked to each other via argument fusion (see Sections 2.4 and 2.6.6). Part Two contains five individual chapters which introduce five semantic sub-types of core SVC in MC and JSM: the Resultative SVC, the Excessive SVC, the Instrumental SVC, the Caused-Motion SVC and the Purposive SVC. Each sub-type of core SVC consists of two cores. The cores may only have the subject argument in common (e.g., in the Resultative SVC, the Instrumental SVC, the Caused-Motion SVC and a sub-type (T2) of the Purposive SVC), or share a referent that has different syntactic functions in two cores (the Excessive SVC), or have both the subject and the object in common (a sub-type (T1) of the Purposive SVC). In the following chapters, I will show that all the core SVCs exhibit the monoclausality with regard to the inter-clausal diagnostics, and demonstrate distinct characteristics from the nuclear SVCs with regard to the intra-clausal diagnostics, suggesting a looser syntactic structure in them.

Chapter Six: Resultative Serial Verb Construction

6.1 Introduction

This semantic sub-type of core SVC is distinctive in two respects. First, the expressions of this sub-type of core SVC may contain the same string of verbs that occur in the Cause-Effect (C-E for short) sub-type of nuclear SVC (for details see Ch. 4). Secondly, most sub-types of the Resultative SVC (hereafter RSVC) are only attested in JSM⁸⁶. The last sub-type which includes two ditransitive verbs to denote an event of transfer is attested in both MC and JSM.

The structure of this chapter corresponds to the structure of Ch. 4, as it is also arranged according to the patterns of combination of transitivity of the component verbs.⁸⁷ Expressions of serial verbs that I illustrate in this section were elicited on the basis of the same component verbs that are investigated in Ch. 4. (For the investigated combinations of serial verbs in my fieldwork, see Section 4.1.) Expressions that are adopted to illustrate the structure of the RSVC in this chapter are listed in the following:

a. Transitive V1 and intransitive V2

In (1), V1 is a transitive verb *tshih* ‘wipe’, and V2 is an intransitive verb *tshingkhi* ‘be clean’. This sub-type of the RSVC is only attested in JSM.

JSM

- (1) *I to a tshih bo tshingkhi, gua bohuatlong pang tshai*
3SG table wipe NEG be.clean I cannot hold dish
‘S/he didn't wipe the table clean. I cannot put dishes on it.’

⁸⁶ But see Ch. 10 Section 10.2.2 for a detailed discussion on some particular expressions that indicate a kind of resultative event attested in both MC and JSM

⁸⁷ The structure in this chapter is arranged in such a way to enable observation of the phenomenon that in some sub-types, the same string of verbs that occur in the Cause-Effect SVC may also occur in the Resultative SVC.

Note that this expression is not an independent negation of V2, as V1 cannot be separated negated at the meantime (for a detailed discussion, see Section 2.5.1). As I will illustrate later, the negative marker *bo* ‘not’ that occurs between the two verbs is an intervening material. The expression denotes a realised event and it should be differentiated from the idiomatic inability construction which has the negative *bue* ‘not’ between two verbs in JSM (and MC) and expresses a kind of modality (see Ch. 1 that I do not consider the inability construction as a type of SVC).

b. Transitive V1 and transitive V2

The string of verbs “study know” can not occur in the RSVC. This is shown in (2). And I will not include this expression in my analysis, as the native speakers of JSM do not employ these serial verbs to express the similar meaning. Moreover, there is no MC equivalent either.

JSM

(2) **Gua khatatshiah o bo/bue ehiau*
 I bicycle study NEG know

Intended: ‘(Riding) the bicycle, I learned it, but I have not fully understood it.’

In order to express a similar meaning, native speakers of JSM use a non-SVC expression *o bo/bue e* ‘have not learned’ by adopting the modal verb *e* ‘lit. can’ after the negative, instead of the verb *ehiau* ‘know’.

The modal status of *e* ‘lit. can’ is discussed in Tsao et al. (1997, 70-73). In JSM, the verb *ehiau* ‘know’ can take an NP object, while the modal *e* ‘lit. can’ cannot; compare (3) and (4).⁸⁸

⁸⁸ Examples are obtained through personal communication with my fellow students who are also native speakers of JSM.

JSM

(3) *Gua ehiau sokhak.*

I know/understand maths

‘I know/understand maths.’

(4) **Gua e sokhak*

I can maths

Intended: ‘I know/understand maths.’

c. Intransitive V1 and Intransitive V2

This sub-type of verb combination may or may not take an object argument. Expression (5) does not take any object, as opposed to (6). Verb combinations of this sub-type of core SVC are only attested in JSM.

JSM

(5) *Gua kh(i)a bue ia.*

I stand NEG be.tired

‘I didn’t get tired by standing.’

00:03:52.191 - 00:03:53.961 B 01-09 VR00006

(6) *Hit tei kun a Sionsiong khau bo tam.*

that CLF handkerchief PN cry NEG be.wet

‘that hankie, Sionsiong cried on it but it didn't get wet.’

00:24:02.450 - 00:24:04.720 MT 37

Note that, despite the occurrence of a negative marker only before V2 in (5) and (6), these expressions do not involve independent pre-V2 negation, as their V1s cannot be separately negated in these expressions. Therefore they are not bi-clausal structures. (See Section 2.5.1 for a more detailed discussion on this JSM-specific negation in the SVC)

The scenario that I set for expression (5) is that a person has stood for a long time waiting for a friend and I asked this person if s/he gets tired as a result of standing. Therefore, interpretation of (5) is about the result of not being tired from standing for a long time, and it does not have the (in)ability reading (also see a discussion about the choice of negatives in Section 3.3.2.5).

d. (Di)transitive V1 and transitive V2

The string of verbs *ka* ‘teach’ and *ehiau* ‘know’ in JSM may also occur in a core SVC (cf. the nuclear SVC with the same verbs discussed in Section 4.1). O1 occurs immediately after V1 in this core SVC, as shown in (7). Note that this sub-type is only attested in JSM.

JSM

(7) *Siansinn ka kan a ehiau ueto*

teacher teach child know drawing

‘The teacher taught the children drawing so that they’ve known/learned it.’

02:00:04.930 - 02:00:07.250 MT 15-45-VR00031-5-14

e. Ditransitive V1 and ditransitive V2

Recall that in the C-E SVC in MC, the verbs *song* ‘send’ and *gei* ‘give’ can occur in a nuclear SVC (see Section 4.1). The verbs ‘send’ and ‘give’ can also occur in a core SVC (i.e., the RSVC), as attested in both MC and JSM. Expressions (8) and (9) denote an event of transferring an item from the actor to the recipient. The verb ‘send’ introduces O1, which denotes the theme that undergoes the transfer. The verb ‘give’ is followed by O2, which denotes the recipient that is involved in the transfer of item. (see Ch. 8 in the thesis for a related discussion in Malchukov et al. (2010, 13-14))

MC

(8) *Wo song (le) yi ben shu gei Lisi.*

I send PFV one CLF book give Lisi

‘I send/sent a book to Lisi.’

JSM

(9) *Gua sang tsit keng tshoh tho Sionsiong.*

I send one CLF book give PN

‘I send/sent a book to Sionsiong.’

00:33:25.453 - 00:33:27.214 MT 47-76 140611-04 12-5-14

In Section 6.2, I will show that expressions of the RSVC exhibit the monoclausality with regard to the inter-clausal diagnostics. In Section 6.3, I will show that these expressions exhibit a looser structure than the nuclear SVCs with regard to the intra-clausal diagnostics. In particular, they allow intervening material and, in some particular sub-types of the RSVC, require obligatory topicalisation of the undergoer argument.

6.2 Inter-clausal diagnostics

6.2.1 Negation

The inter-clausal diagnostic of independent negation shows that to independently negate component verbs in the RSVC is not acceptable. In a bi-clausal structure where V2 takes an object, independent pre-V2 negation can have the scope over both V2 and the object. However, in (1) (“wipe not be.clean”), (5) (“stand not be.tired”) and (6) (“cry not be.wet”), there is no object following V2 (because the SVC is either intransitive or the object is obligatorily topicalised). Most importantly, as I have discussed in Section 2.5.1, V1 in these expressions of the RSVC cannot be independently negated. Consequently, the testing condition is not met in the three examples. (See Section 6.2.6 for evidence of the monoclausality of these expressions with regard to the prosodic structure. Also, the monoclausality of these expressions is further suggested by obligatory topicalisation of the object argument. For a related discussion, see Section 2.4 for the difference between the SVCs and the bi-clausal structures in terms of argument structure. Also see Sections

2.7.2.4 and 6.3.4 for discussion of the obligatory topicalisation of an undergoer argument).

In expressions (7)-(9), each verb is immediately followed by an object. Independent pre-V2 negation with the same string of verbs happens in a bi-clausal structure. Note that the second clause in (10), which is negated, can only take *gua* ‘I’ in the first clause as its subject, in contrast to the interpretation of the core SVC in (7).

JSM

(constructed)

(10) *Gua ka kan a bue ehiau ueto*

I teach child NEG know drawing

‘I teach/taught the children. I don’t know drawing.’ (bi-clausal)

It is not easy to negate V2O2 in the expressions of the sub-type e. simply by adopting a single eventive negative marker (e.g., *mei* ‘not’ in MC and *bo* ‘not’ in JSM) before V2 in a second clause. In expressions (11) and (12), the negative morpheme and the copular verb take the verb ‘give’ and the recipient argument in the focal domain. In other words, this second clause has a copular predicate which takes the verb ‘give’ and the recipient argument as its complement⁸⁹.

MC

(11) *Wo song le yi ben shu bu shi gei Lisi.*

I send PFV one CLF book NEG COP give PN

‘I sent (out) a book. The book is not for Lisi.’ (bi-clausal)

JSM

(constructed)

(12) *Gua sang tsit keng tsheh m si tho Sionsiong.*

I send this CLF book NEG COP give PN.

⁸⁹ Note that the recipient argument is not able to be passivised with a single ditransitive verb on its own or in a serial verb construction that also contains such a ditransitive verb. See Section 4.2 for a discussion.

‘I sent (out) a book. The book is not for Sionsiong.’ (bi-clausal)

6.2.2 Passivisation of the object of V2

This diagnostic has limited applicability with expressions of the RSVC. It does not apply to expressions (1) (“wipe not be.clean”), (5) (“stand not be.tired”) and (6) (“cry not be.wet”). Expression (7) (“teach child know drawing”) does not allow O2 to be passivised due to semantic reasons (i.e., the skill itself is not the affected item in such an event; also see Section 4.2.1 for a related discussion). Furthermore, in (8) and (9), O2 cannot be passivised. The ditransitive verbs, such as *gei* ‘give’ and *song* ‘send’ in MC, do not allow the recipient argument to be passivised, as opposed to the theme argument (see Section 4.2.1). In JSM, neither of the two object arguments taken by the ditransitive verb *tho* ‘give’ can be passivised, illustrated in (13)-(15). With regard to passivising each object, the verb *sang* ‘send’ in JSM behaves in line with the ditransitive verbs *song* ‘send’ and *gei* ‘give’ in MC (see also Section 4.2.1), i.e., the recipient argument is not passivisable in contrast with the theme, illustrated in (16)-(18).

JSM

tho ‘give’

(13) *Gua tho Sionsiong tsit ken tsheh.*

I give PN this CLF book

‘I gave Sionsiong this book.’

00:32:14.790 - 00:32:16.984 MT 47-76 140611-04 12-5-14

(14)**Sionsiong khih gua tho tsit keng tsheh.*

PN PASS I give this CLF book

Intended: ‘Sionsiong was given this book by me.’

(15)**Tsit keng tsheh khih gua tho Sionsiong lo.*

this CLF book PASS I give PN DM

Intended: 'This book was given to Sionsiong by me.'

sang 'send'

(16) *Gua bo sang Sionsiong tsit ken tsheh.*

I NEG send PN this CLF book

'I didn't send Sionsiong this book.'

00:36:40.345 - 00:36:42.255 MT 47-76 140611-04 12-5-14

(17) **Sionsiong khih gua sang tsit keng tsheh.*

PN PASS I send this CLF book

Intended: 'Sionsiong was sent this book by me.'

(18) *Tsit keng tsheh khih gua sang Sionsiong lo.*

this CLF book PASS I send PN DM

'This book was sent to Sionsiong by me.'

00:36:08.173 - 00:36:10.815 MT 47-76 140611-04 12-5-14

6.2.3 Independent modification by temporal adverbial

It is awkward to force V1 and V2 in the RSVC to be modified by different temporal adverbials. I illustrate this awkwardness with expressions (19) and (20). I do not repeat the other unacceptable expressions with regard to the same diagnostic.

JSM

(19) **I to a tsama tshih tsittsun bo tshingkhi.*

3SG table just.now wipe now NEG be.clean

Intended: 'S/he wiped the table just now. The table is not clean.'

(20) **Gua tsama ka kan a, tsittsun bue ehiau ueto.*

I just.now teach child now NEG know drawing

Intended: ‘I taught the child (something). (I) now do not know drawing.’

6.2.4 Independent marking of viewpoint aspect

It is not possible for each component verb in the RSVC to be modified by a distinct viewpoint aspect. V2s in expressions (1) (“wipe not be.clean”), (5) (“stand not be.tired”), (6) (“cry not be.wet”) and (7) (“teach child know drawing”) are stative verbs that are not commonly marked by a particular viewpoint aspect. For the expressions (8) and (9), forcing each verb and its argument to be independently marked by a distinct or the same viewpoint aspect (the experiential aspect) is not acceptable, illustrated in (21) and (22).

MC

(21)**Wo song guo yi ben shu, gei guo Lisi.*

I send EXP one CLF book give EXP PN

Intended: ‘I sent a book before. I gave (the book) to Lisi before.’

JSM

(22)**Gua pat sang tloh tsit keng tshoh, tho tloh Sionsiong.*⁹⁰

I before send EXP one CLF book give EXP PN

Intended: ‘I sent a book before. I gave (the book) to Sionsiong before.’

6.2.5 Independent modification by manner adverbial

The RSVC does not allow its component verbs to be modified by different manner adverbials. V2s in expressions (1) (“wipe not be.clean”), (5) (“stand not be.tired”), (6) (“cry not be.wet”), (8) (“send something give someone”) and (9) (“send something give someone”) denote states that can hardly be specified with a particular manner. Therefore, I test expression (7) (“teach child know drawing”) with regard to the diagnostic of

⁹⁰ The verb *tho* ‘give’ in JSM seems to have grammaticalised. My interviewees rejected the expression I constructed as **pat tho tloh Sionsiong tsit keng tshoh*, in which the verb *tho* ‘give’ is marked by the experiential marker *pat...tloh* (see Section 3.3.2.4.4), intended to mean that the subject sent Sionsiong a book before.

independent modification by manner adverbial, as illustrated in (23) and (24).⁹¹ The resulting expressions are awkward. The first clause says that the subject teaches the children (drawing) slowly, i.e., bit by bit. However, the second clause says that the children learned drawing quickly, which is considered as apparently contradictory to the slow progress of teaching denoted by the first clause. Given this contradictory information, the two clauses can hardly be construed in a sentence.

JSM

(23)**Gua ban a ka kan a, suisui ehiau ueto.*

I slowly teach child quickly/immediately know drawing

Intended: 'I taught the children slowly. (They) quickly/immediately learned drawing.'

MC

(24)**Wo manmande jiao haizimen, xunsude dong le huahua.*

I slowly teach children quickly know PFV drawing

Intended: 'I taught the children slowly. (They) quickly learned drawing.'

6.2.6 Prosodic structure

In my investigation, component verbs that are not separated by an object argument in the RSVC require V1 to undergo tone sandhi once the tone sandhi condition is met. This is the evidence suggesting that the component verbs do not occur in separate clauses. For example, in the expression *sue bo the* 'wash not be.clean', *sue* 'wash' as V1 must undergo tone sandhi from 53 tone (its original tone) to 24 tone in the RSVC. Tone sandhi can also be observed on V1 *kha* 'stand' in (5) (*kh(i)a bue ia* 'lit. stand not be.tired'), which undergoes a 33 to 22 tone sandhi. This obligatory tone sandhi indicates

⁹¹ If V2 *ehiau* 'know' is interpreted as knowing something, the manner adverbial or the speed adverbial *suisui* 'quickly, or immediately' in the second clause is more likely to modify the interval between the two events, i.e., between teaching and knowing, rather than the progress of knowing something. Nevertheless, I heard speakers say *banban a ehiau...* 'lit. slowly know...'. Therefore, I still apply the adverbial modification to V2 *ehiau* 'know'. However, strictly speaking, I do not think that a manner adverbial, such as 'quickly' or 'slowly', can modify the stative verb 'know'.

the tightness of the unit that consists of V1 and the negative that immediately follows V1, in contrast to the bi-clausal structure that forms in the independent pre-V2 negation. In the bi-clausal structures, where the two clauses are separately negated, a prosodic break is highly likely to occur between them, thus blocking tone sandhi from happening.

6.2.7 Interim Summary

As I have shown above, the RSVC does not behave in line with bi-clausal structures with regard to the inter-clausal diagnostics. Although not every expression of the RSVC that I provide may participate in all inter-clausal diagnostics, their behaviours with regard to the inter-clausal diagnostics that they are able to participate in do exhibit a split from those of bi-clausal structures.

6.3 Intra-clausal diagnostics

6.3.1 Passivisation of O1

The diagnostic of passivisation of O1 does not apply in this case. Probably due to semantic reason and syntactic constraints⁹², expressions (1) (“wipe not be.clean”), (5) (“stand not be.tired”) and (6) (“cry not be.wet”) do not allow passivisation of O1. Passivising O1 in (8) (‘send give in MC’) does not apply either.⁹³ However, O1 in (9) (‘send give’ in JSM) is passivisable.⁹⁴ Passivising O1 in (7) (“teach child know

⁹² Presumably there is also a syntactic constraint that expressions (1), (5) and (6) cannot occur in a passive. The negative passive is usually conveyed with a negative marker that occurs before the passive marker in JSM, similar to MC. For example,

(1) *Hit tsiah kau ia be khih I ge si.*
 that CLF dog yet not PASS 3SG starve die
 ‘That dog has not been starved to death yet.’

⁹³ Passivising O1 (the theme) in (8) results in a structurally ambiguous expression, which is very similar to the MC passive expression that consists of two ditransitive verbs discussed in Section 4.2.1. Because of the ambiguity that I am not able to resolve at this stage, I do not consider the resulting expression as a reliable test result in the section.

⁹⁴ Although the verb *tho* ‘give’ on its own does not allow either of its objects to be passivised, the verb *sang* ‘send’ on its own does allow its theme argument to be passivised as opposed to the recipient argument (see Section 6.2.2). Passivising O1 (the theme) in the JSM expression ‘send give’ of the RSVC is grammatical, as opposed to its O2 (the recipient). This is shown in (2) below.

JSM

(2) *Hit keng tshoh khih gua sang tho Sionsiong lo.*
 that CLF book PASS I send give PN DM
 ‘That book was sent to Sionsiong by me.’

00:00:00.830 - 00:00:05.370 LTS 56-4 10-9-15

drawing”) is grammatical as opposed to O2 probably due to the semantic requirement of the subject in a passive construction that it must be the children who is affected in such an event not the content (drawing) of teaching. Such a phenomenon has been discussed in Section 4.2.1, and I do not repeat it in this chapter. The other diagnostics are applicable. I will illustrate them in the following.

6.3.2 Insertion of intervening material

Intervening material is observed in all the expressions of the RSVC. First, as can be observed straightforwardly in expressions (1), (5) and (6), two component verbs are intervened by a negative marker (i.e., *bo* ‘not’ or *bue* ‘not’ in JSM). Note that without the intervening negative marker, the expression is not a core SVC (cf. Section 4.3.2 for the inability of the Cause-Effect SVC to accept any inserted intervening material and Section 4.3.4 for the optional topicalisation observed with the Cause-Effect SVC as opposed to the obligatory topicalisation observed in the RSVC, as illustrated in Section 6.3.4).

Secondly, in addition to the insertion of the negative marker, a degree adverb, typically *(i)a* ‘very’, can also occur after V1 and before V2 in the RSVC. The adverb expresses a high degree of the resulting property (or the effect) in the event. For example, in the scenario where someone was asking whether the table was wiped clean by a third person, the speaker can answer it with the sentence (25). A similar example (26) shows that a degree intensifier can occur between the verbs *kh(i)a* ‘stand’ and *sian* ‘be tired’.

JSM

(25) *Si a, i tshih (i)a tshingkhi lo.*

yes DM s/he wipe very be.clean DM

‘Yes, s/he has wiped it very clean.’

00:33:35.390 - 00:33:37.490 B 15-31 VR0001 29-4-14

The ungrammaticality of passivising O2 in this expression may indicate that although the two ditransitive verbs have the same set of semantic arguments. O2 is kept in the argument domain of V2 in the syntax.

(26) *I kh(i)a (i)a sian lo.*

3SG stand very be.tired DM

‘S/he got very tired by standing.’

00:01:24.779 - 00:01:26.529 B 01-09 VR00006

Thirdly, the occurrence of an object argument between the two verbs is also observed in expressions (7) (“teach child know drawing”)-(9) (“send something give someone”). The non-contiguity observed between the component verbs in the RSVC suggests the status of core SVC (see Section 2.7.2.2 that the object argument can be also considered as a type of intervening material).

6.3.3 Coordination within the SVC

Expressions (1), (5) and (6) do not seem to be able to participate in coordination within the SVC. I have not been able to find out the reason to account for their behaviour in this respect at the moment, but I assume it might be related to the capacity (or volume) of the core serialisation structure of these expressions.

The non-contiguous expressions (7) (“teach child know drawing”)-(9) (“send something given someone”) allow their V2O2 to be coordinated. The constructional meaning holds on the coordinated core. An example is given in (27). V2 *ehiau* ‘know’ and its argument *ueto* ‘drawing’ is coordinated with another *ehiau* ‘know’ and a different argument *tshiunnkua* ‘singing’ by the conjunction marker *kap* ‘and’. The constructional meaning that the speaker taught the children a particular skill (and they now know it) is associated with both cores; that is, the children have been taught to know both skills. It is in contrast with (10), which is a bi-clausal construction, albeit with a shared subject between the two clauses.

JSM

(27) *Gua ka kan a ehiau ueto (kap) ehiau tshiunnkua.*

I teach child know drawing and know singing

‘I taught the children drawing and singing, and they’ve learned the two.’

00:00:02.110 - 00:00:06.310

LTS 47 01-06-2015

Similarly, as can be seen in (28), the RSVC expression in (9) (“send something give someone”) allows its second core to be coordinated. In addition, the meaning of transferring the sweets by the agent sending them to a recipient applies to the coordinated cores. The MC equivalent is shown in (29).

JSM

(28) *Gua siunnbeh sang tsuai e tong a tho Sionsiong a si tho Ahim.*

I want send these sweet give PN or give PN

‘I want to/will send these sweet to Sionsiong or to Ahim.’

00:00:01.260 - 00:00:07.860

LTS 56-2 10-9-15

MC

(29) *Wo yao song na fen wenjian gei Lisi huozhe gei Zhangsan.*

I will send that CLF file givePN or givePN

‘I will send that file to Lisi or to Zhangsan.’

6.3.4 Obligatory topicalisation of the undergoer argument

Two sub-types of the RSVC require obligatory topicalisation of the undergoer argument. In the expressions of these two sub-types, the topicalised undergoer argument simultaneously functions as the object argument of V1 (in the first core) and the sole argument of the intransitive V2 (in the second core) (See the condition of obligatory topicalisation of the undergoer argument in SVCs in Section 2.7.2.4). In expressions (1) (“wipe not be.clean”), the object of V1 in the first core is coindexed with the subject of V2 in the second core in the RSVC. In (6) (“cry not be.wet”), the subject argument

cannot take the position between V1 and the negative. The two expressions are repeated in (30) and (31).

JSM

(30) *I to a tshih bo tshingkhi, gua bohuatlong pang tshai*
3SG table wipe NEG be.clean I cannot hold dish
'S/he didn't wipe the table clean. I cannot put dishes on it.'
00:18:57.483 - 00:19:02.423 MT 15-16 VR0002 30-4-14

(31) *Hit tei kun a Sionsiong khau bo tam.*
that CLF handkerchief PN cry NEG be.wet
'That hankie, Sionsiong cried on it but it didn't get wet.'
00:24:02.450 - 00:24:04.720 MT 37

This coindexed argument (or the fused argument), *to a* 'table' must be topicalised before V1. The undergoer argument *hit tei kun a* 'that piece of handkerchief' cannot occur after V2 or occur immediately after V1 and before the negative. Expression (32) for example, attempting to place the undergoer argument in (6) (repeated in (31)) after V2, is however unacceptable in JSM.

JSM

(32) **Sionsiong (ia) khau bo/be tam tshiunkuna.*
PN yet cry not/not.yet be.wet handkerchief
Intended: 'Sionsiong cried on the handkerchief but it didn't get wet.'

The basic word order in the non-contiguous sub-types of the RSVC, as shown in (7)-(9)⁹⁵, is VOVO. This basic word order indicates that their undergoer arguments do not undergo obligatory topicalisation. I assume that these undergoer arguments may undergo optional topicalisation in the core SVC, but more fieldwork data are needed to

⁹⁵ It is arguable that O1 in (7) involves an agent-like action with regard to the action denoted by V2 *ehiau* 'know or understand', if it is particularly interpreted in the scenario of learning something.

support this point.

6.3.5 Interim Summary

In this section, I have shown that expressions of the RSVC exhibit a looser structure with regard to the intra-clausal diagnostics as some of them may allow intervening material(s), such as a negative marker or a degree adverb, to occur between the verbs. In others, V1 is immediately followed by O1, which can be considered as another type of intervening material. Expressions that have an object immediately after V1 typically allow coordination of V2O2 within the SVC. The constructional meaning holds in the last core. The last intra-clausal diagnostic also shows that sub-types of the RSVC do not behave as the nuclear SVCs with regard to obligatorily topicalising the undergoer argument, and thus should be considered as a type of core SVC.

6.4 Summary

This chapter discusses a type of core SVC: the Resultative SVC (RSVC). I have shown that the RSVC exhibits the monoclausality with regard to the inter-clausal diagnostics (Section 6.2). It can be seen that JSM allows the same string of verbs that occur in three sub-types of the C-E SVC (i.e., “wipe be.clean”, “cry be.wet” (also the subject-oriented “stand be.tired”), and “teach know”) to occur in the RSVC, while MC only allows the same string of verbs to occur in one sub-type of the C-E SVC (i.e., “send give” type) and the RSVC (also the “send give” type). With regard to the intra-clausal diagnostics in particular, I show that expressions of the RSVC behave differently from the nuclear SVCs (see Part I), as they form a looser structure (Section 6.3). The component verbs in the RSVC can either be separated from each other by a negative marker or a degree adverb. Moreover, some sub-types of the RSVC have an O1 immediately following V1 thus creating non-contiguity between the two verbs. These expressions of non-contiguous RSVC also allow their second core to be coordinated. In the resulting expressions of coordination within the SVC, the constructional meaning holds across

the cores. With regard to the last intra-clausal diagnostic (obligatory topicalisation), expressions of several sub-types of the RSVC show that the undergoer argument must be topicalised, contrasting with the optional topicalisation of the undergoer argument observed in the C-E SVC (see Section 4.3.4).

Chapter Seven: Excessive Serial Verb Construction

7.1 Introduction

This chapter introduces a distinct type of SVC in MC⁹⁶, which is not discussed in existing typological studies of SVCs: the Excessive SVC (hereafter ESVC). The ESVC exhibits formal similarity to the C-E SVC since both of them involve two adjacent unmarked verbs. In the ESVC, V1 is an activity verb and V2 is a stative verb that denotes a property of a particular item. Semantically, a majority of the expressions of the ESVC denote a final state of a participant due to a preceding process/action. However, this final state is always conveyed as also indicating a deviation from a contextually determined standard, hence accompanied by an attitude of dissatisfaction on the part of the speaker (Lu 1990, Li 1994, Wang 1996, Ma and Lu 1997, Ljungqvist 2007) or *negative consequences* in the sense of Fortuin (2013, 35) (See also an argument in Zhang (2013), which takes the ESVC as a means of marking “mirativity” following Delancey (1997)). I call it the *Excessive SVC* given its obvious meaning of excess, which is absent in the C-E SVC. Compare (1) and (2).

MC

ESVC

(1) (*Tamen*) *keng wa qian le*.

they hole dig be.shallow LE⁹⁷

‘The hole has been dug too shallow by them.’⁹⁸

(The component verbs are cited from Lu (1990, 1). The clause is mine.)

⁹⁶ I didn’t observe equivalent phenomena in JSM whereby two adjacent verbs express the excessive meaning.

⁹⁷ I will discuss the status of *le* in the ESVC in Section 6.3.3. I gloss the post-verbal *le* as LE, and the sentence-final *le* as PFV.

⁹⁸ The adverb *too* is adopted in the translation of the ESVC to explicitly express the excess degree of a property. Passive used in translation is only an attempt at proximity to the sentence meaning. It should not be taken as equal to the exact semantics of the ESVC.

C-E SVC

(2) *Zhangsan da si le na tiao feng gou.*

Zhangsan hit die PFV that CLF be.mad dog

‘Zhangsan hit the mad dog dead.’

It is noteworthy that in some expressions, the same string of verbs can be observed to be able to occur either in the ESVC or in the C-E SVC. Examples are provided in (3) and (4), both of which contain the serial verbs *zhi* ‘weave’ and *da* ‘be big’. A continuing clause is added to each expression to disambiguate the constructions.

MC

ESVC

(3) *Maoyi nainai zhi da le, chuan qilai bu haokan.*

sweater grandma weave be.big LE wear rise.come NEGbe.good looking

‘The sweater has been woven too big by grandma, and it does not look good on (me).’

C-E SVC

(4) *Maoyi nainai zhi da le, pang dian ye neng chuan.*

sweater grandma weave be.bigPFV be.fat a.little also can wear

‘Grandma has woven the sweater big, (so even if) one puts on a little weight, it still fits.’

It has been noted that not only is the meaning different between the two SVCs, but they also differ in telicity; see Shen and Peng (2010). In this chapter, I will show that despite the monoclausality of the ESVC with regard to the inter-clausal diagnostics, it has a different syntactic structure from the C-E SVC with regard to the intra-clausal diagnostics. To be more precisely, the serial verbs in the ESVC form a looser structure than the C-E SVC, as the component verbs in the ESVC can be separated from each other by means of inserting an intensifier in between. Furthermore, V2 and the post-verbal *le* can undergo independent coordination independently from V1 in the

ESVC. In addition, the undergoer argument is always topicalised in the ESVC, as opposed to the optional topicalisation of the undergoer argument in the C-E SVC (see Section 4.3.4).

7.2 Inter-clausal diagnostics

7.2.1 Negation

As I have discussed in Section 2.5.1, bi-clausal structures allow their component verbs to be negated independently from each other, as opposed to SVCs. In contrast, independent negation is not possible in an SVC. For example, placing a pre-V2 negative in the ESVC, attempting to have an independent negation of V2 in the construction, only results in an unacceptable expression, as shown in (5).

MC

(5) **Keng tamen wa mei/bu qian le.*

hole they dig NEG/NEG be.shallow LE

a. Intended: ‘The hole, they dug, but it did not become too shallow.’ (*mei* ‘not’)

b. Intended: ‘The hole, they cannot dig it too shallow.’ (*bu* ‘not’)

7.2.2 Passivisation of the object of V2

In the transitive expressions of the ESVC, the object can be passivised (see Section 7.2.6 for tone sandhi in the ESVC that does not take an object). Therefore, on the basis of the original example in (1), the corresponding passive form is provided in (6).

MC

(6) *Keng bei tamen wa qian le.*

hole PASS they dig be.shallow LE

‘The hole has been dug too shallow by them.’

7.2.3 Independent modification by temporal adverbial

It is not possible to modify component verbs in the ESVC with different temporal adverbials (see Section 2.5.3). The resulting expression (7) is unacceptable.

MC

(7) **Keng tamen jintian wa mingitan qian le.*

hole they today dig tomorrow be.shallow LE

Intended: ‘The hole, they have dug (it) today. Tomorrow, it will become too shallow.’

7.2.4 Independent marking of viewpoint aspect

It is not possible to independently mark each component verb in the ESVC with a distinct viewpoint aspect marker. Expression (8) is intended to mark V1 by the perfective aspect with *le* and to interpret V2-*le* as denoting a futural situation, marked by *yao* ‘will’.

MC

(8) **Keng tamen wa le yao qian le.*

hole they dig PFV will be.shallow LE

Intended: ‘The hole, they have dug (it). It will become too shallow.’

7.2.5 Independent modification by manner adverbial

This diagnostic does not apply in this case. This is because V2 in the ESVC is a stative verb that denotes a property of an item (or individual-level predicate (Carlson 1977[1980])), which consequently does not accept modification by a manner adverbial. It is also awkward to force an interpretation such that a manner adverbial modifies the interval until the final state is reached. The ungrammaticality of forcing the independent

modification of V1 by a manner adverbial in the ESVC is illustrated in (9)

MC

(9) **Keng, tamen manmande wa qian le.*

hole they slowly dig be.shallow LE

Intended: ‘They slowly dug the hole and it becomes too shallow.’

Or ‘They dug the hole and slowly it becomes too shallow.’

7.2.6 Prosodic structure

Given the contiguity of the component verbs in the ESVC, tone sandhi obligatorily takes place once the combination of the original tones of the component verbs meet the tone sandhi condition. For example, in (10), both verbs *jian* ‘cut’ and *duan* ‘be short’ have an original 214 tone. When they occur in the ESVC, V1 obligatorily changes its 214 tone to a 35 tone.

MC

(10) *Yifu ta jian²¹⁴⁻³⁵ duan²¹⁴ le.*

clothes 3SG cut be.short LE

‘The piece of clothes, s/he has cut it too short.’

For examples that do not contain an object (i.e., are not able to participate in the diagnostic of passivisation in Section 6.2.2), tone sandhi can be used to diagnose its monoclausality. V1 also undergoes obligatory tone sandhi from 214 to 35 in expression (11). Note that this surface form is ambiguous in meaning and structure. The structure can be either the ESVC or the C-E SVC. (However, see Section 7.3 for the intra-diagnostics that can distinguish the two structures.)

MC

(11) ?*Ta zou²¹⁴⁻³⁵ yuan²¹⁴ le.*

3SG walk be.far LE/PFV

‘S/he has walked too far.’ (ESVC (LE))

‘S/he has walked far away.’ (C-E SVC (PFV))

7.2.7 Interim Summary

With regard to the inter-clausal diagnostics, the ESVC can be differentiated from bi-clausal structures. V2-*le* does not accept independent negation, modification by temporal adverbial or manner adverbial, or marking of a distinct viewpoint aspect. V1 undergoes obligatory tone sandhi when the condition of tonal change is met.

7.3 Intra-clausal diagnostics

7.3.1 Passivisation of O1

This diagnostic does not apply here, as there is no way to identify the “O1” in the transitive expressions of the ESVC. This is due the fact that the same undergoer argument functions as the object in the first core and the subject in the second core at the same time and it is always topicalised.

7.3.2 Insertion of intervening material

The amenability of inserting intervening material is the evidence suggesting that there is a distinct structure in the ESVC from the C-E SVC, despite of the same string of verbs. As shown in (12), insertion of the intensifier *tai* ‘too’ between the serial verbs in the ESVC is grammatical, satisfying the two conditions of applying this diagnostic (see Section 2.7.2.2 for details). In contrast, it is not permissible for the degree adverb *tai* ‘too’ to occur within the C-E SVC despite the same string of verbs as in the ESVC, as shown in (13).

MC

ESVC

(12) *Maoyi nainai zhi tai da le.*

sweater grandma weave too be.big LE

‘The sweater has been woven too big by grandma.’

C-E SVC

(13) **Nainai zhi tai da le maoyi.*⁹⁹

grandma weave too be.big LE sweater

Not: ‘Grandma has woven the sweater too big.’

7.3.3 Coordination within the SVC

A stative verb followed by *le* may contribute to the excessive meaning in MC (Li and Thompson 1989, 188-189, Ljungqvist 2007, 211). It is then reasonable to assume that they form a constituent in the ESVC. This is indeed reflected by the fact that the ESVC allows its V2-*le* to be coordinated within the SVC. An example is given in (14). The conjunction word *erqie* ‘and’ connects the coordinated cores *qian le* ‘be too shallow’ and *song le* ‘be too loose’.

MC

(14) *Zhuangzi da qian _____ le erqie song _____ le.*

stake hit be.shallow LE and be.loose LE

‘The stake has been driven (too) shallow and (too) loose.’

An example from the Chinese question-answer website *Baidu Zhidao* confirms the validity of the V2-*le* coordination in the Excessive construction. An example is provided

99 Even in conjunction with topicalisation of the undergoer argument, when the degree adverb *tai* ‘too’ is inserted in between two verbs, the surface form, which was previously ambiguous in meaning (see Section 6.1), only expresses the excessive meaning (b.).

- (1) *Maoyi zhi tai da le.*
sweater weave too be.big LE
a. *‘The sweater was woven big.’ (Cause-Effect)
b. ‘The sweater has been woven too big.’ (Excessive)

in (15). The conjuncts in coordination are underlined.

MC

- (15)Q: *Qiang qi gao le huozhe chang le zenme bujiu?*
wall build be.high LE or be.long LE how remedy
'What to do to the wall which is built too high or too long?'

The question itself contains a V2-*le* coordination in which the conjuncts are linked by the disjunctive coordinator *huozhe* 'or'. The first conjunct *gao le* 'be too high' preceding the connective word is coordinated with another similar constituent *chang le* 'be too long'.

The behaviour of the C-E SVC with regard to this diagnostic is in contrast to that of the ESVC. Recall that the two adjacent verbs in the C-E SVC form the nucleus such that they cannot be separated by other material or undergo independent coordination within the SVC. The C-E SVC can only accept coordination of the whole complex predicate, not any single part of it (i.e., individual serial verb). Compare (16) with (17).

MC

C-E SVC

- (16)*Zhuangzi da shen le bingqie da yanshi le.*
stake hit be.deep PFV and hit be.solid PFV
'The stake was driven deep and solid (into the ground).'

- (17)*Zhuangzi da shen le (*bingqie yanshi le).*
stake hit be.deep PFV and be.solid PFV
Intended: 'The stake was driven deep and solid (into the ground).'

7.3.4 Obligatory topicalisation of the undergoer argument

7.3.4.1 Result

In contrast to the C-E SVC (see Section 4.3.4), the ESVC requires its undergoer argument to be topicalised (Li 1994, Shen and Peng 2010, Zhang 2014). This characteristic can be seen in (18)-(20). Note that the topicalised argument may occur either before the subject or immediately after it.

MC

(18) *Zhe jian yifu ni mai gui le.*
this CLF clothes you buy be.expensive LE
'This piece of clothing has been bought too expensive.'
(Lu (1990, 4))

(19) *Tamen keng wa qian le.*
they hole dig be.shallow LE
'The hole has been dug too shallow by them.'
(Lu (1990, 1))

(20) *Yupian ni qie hou le.*
fish.slice you cut be.thick LE
'The fish slices have been cut too thick by you.'
(Serial verbs cited from Ma and Lu (1997, 18))

None of the above three examples can be expressed in the SVVO order, as shown in (21)-(23).

MC

(21)**Ni mai gui le zhe jian yifu.*

I buy be.expensive LE this CLF clothes

Intended: ‘This piece of clothing has been bought too expensive.’

(22)**Tamen wa qian le keng.*

3SG dig be.shallow LE ditch

Intended: ‘The hole has been dug too shallow by them.’

(23)**Ni qie hou le yupian.*

you cut be.thick LE fish.slice

Intended: ‘The fish slices have been cut too thick by you.’

7.3.4.2 An explanation of the obligatory topicalisation in the ESVC

As already discussed in the last sub-section, topicalisation of the undergoer argument in the ESVC is obligatory (the same phenomenon can be observed in the Resultative SVC in JSM; see Ch. 6)¹⁰⁰. So far in the existing literature, Zhang (2014) has argued that it is the constructional meaning of “evaluation” that requires the profiling of the comment part (V2-*le*), which consequently requires topicalisation of the undergoer argument in the ESVC¹⁰¹. In a different way, I provide a syntactic explanation for this phenomenon. Precisely speaking, it is because of the existence of two structurally different cores in the ESVC such that the position of the shared undergoer argument between the two cores cannot be as flexible as it is in the C-E SVC.

¹⁰⁰ In terms of information structure, to say that a grammatical unit is topicalised means that it is associated with a particular pragmatic function. Quite differently, the phenomenon of obligatory topicalisation of the undergoer argument observed in the ESVC and a sub-type of RSVC has more to do with the syntax as it is argued in this section. While I am aware that at the pragmatic layer, topicalisation and obligatoriness are mutually exclusive, I at this stage only adopt the term *obligatory topicalisation* to refer to the phenomenon that a non-actor argument should always stay in a position before V1 in the SVC rather than staying after the verbal sequence as a classic undergoer argument (or object argument) does (cf. the post-verbal object argument in the C-E SVC). At the meantime, it should also be noted that the obligatorily topicalised undergoer argument cannot be an indefinite NP, e.g., it is unacceptable to say **yi ge keng wo wa qian le* ‘lit. a hole was dug too shallow by me’. This requirement on definiteness of the argument may have to do with the semantics of excessiveness that is semantically close to superlatives (e.g., *very* and *too* in English are considered as superlative degree markers (Ultan 1972, 141)), while superlatives usually require marking for definiteness cross-linguistically (for more details, see Ultan 1972, 142, Heine and Kuteva 2002, 106).

¹⁰¹ I think the author might be suggesting that it is the predication of the undergoer argument in the expression that results in the obligatory topicalisation.

As I have discussed in Sections 2.6.2-3, the term nuclear SVC refers to an MVC that forms via predicate fusion. That is, despite the occurrence of two verbs in the expressions, they function on a par with a single verb. As suggested by Peng and Chappell (2011, 144) in a study of a Jingpho nuclear SVC, the flexible ordering of the nominal elements that occur to the left of the nucleus can be observed due to the formation of the nuclear serialisation. Likewise, in the transitive C-E SVC in MC, the undergoer argument can be optionally topicalized as that of a transitive verb in a simple clause. For example, topicalisation of the object *yifu* ‘clothes’ in the C-E SVC in (24) is optional. The behaviour of this object with regard to optional topicalisation parallels with the optional topicalisation of the object of the transitive verb *xi* ‘wash’ in (26) that forms on the basis of the simple clause, as shown in (25).

MC

(24) *Yifu ayi xi ganjing le, na qu shai le.*
 clothes aunt wash be.clean PFV take go dry PFV

‘The clothes, the aunt washed (them) clean and took (them) away to dry.’

(25) *Ayi xi le yifu.*
 aunt wash PFV clothes

‘The aunt washed clothes.’

(26) *Yifu ayi xi le.*
 clothes aunt wash PFV

‘The clothes, the aunt washed (them).’

Recall that the same verbs can occur either in the C-E SVC or the ESVC as shown in (3) and (4), where *zhi da le* ‘lit. weave be.big le’ may receive two different interpretations, i.e., something got woven big (Cause-Effect) or something got woven too big (Excessive). However, only the latter requires the undergoer argument to be topicalised in a pre-V1 position. Given that at the semantic level of argument structure, what is

woven is entailed as an undergoer in the semantics of V1 as well as the sole semantic argument of V2. That is, there is no difference on the semantic side of the two SVCs. Consequently, if the semantics-syntax algorithm in the RRG framework is taken consideration at this stage, the phenomenon of obligatory topicalisation only observed in the ESVC would not be fully accounted for. Instead, by using a two-level argument structure and taking the existence of two separate syntactic argument structures in a core serialisation into account, this phenomenon can be explained. The reason why only the ESVC and a sub-type of Resultative SVC require obligatory topicalisation of the co-referred undergoer argument can be sought for by comparing their argument structure with the one observed in other types of core SVC.

Unlike the nuclear SVC, since there are two separate argument structures in the core SVC that form via the process of argument coindexation at the syntactic level of argument structure, the argument structures must be linked by coindexing the identical arguments such that they occur within a monoclausal structure (Sections 2.6.2 and 2.6.6). Comparing the argument structure of the ESVC and the one of the other core SVCs in more detail, it can be seen that there is a difference between them, despite that all the core SVCs contain two separate argument structures. It is because of this difference in argument structure that the obligatory topicalisation of the undergoer argument is only observed in the ESVC (as well as the RSVC in JSM) but not in the other types of core SVC. Most core SVCs form on the basis of subject argument fusion. In this case, as each component verb in the core SVC of subject argument fusion takes a distinct object, V2 do not coindex its undergoer argument with the one of V1, i.e., they do not share the same referent. At the meantime, the subject argument of V2 in these core SVCs coindexes with the subject argument of V1 so that the two cores are linked to each other and there is only one subject argument realised in the syntax. For example, V2s, such as *zhua* ‘catch’ in the Purposive SVC (27) and *qie* ‘cut’ in the Instrumental SVC (28), are both transitive and take their own object arguments, *tuzi* ‘rabbit’ and *rou* ‘meat’ respectively, which are different from the V1s’, namely *dong* ‘hole’ and *knife* ‘dao’. Only V2’s subject argument *ta* ‘s/he’ coindexes with the subject argument of V1’s

in these two types of core SVC.

MC

Purposive SVC

(27) *Ta wa dong zhua tuzi .*

3SG dig hole catch rabbit

'S/he climbed the tree to pluck fruits.'

Instrumental SVC

(28) *Ta na dao qie rou.*

3SG take knife cut meet

'S/he cut meat with a knife.'

A sub-type of the Purposive SVC (also a core type of SVC; see Ch. 10 for details of the T2 Purposive SVC), such as (29), does not involve obligatory topicalisation of the undergoer argument either, despite the non-occurrence of the object argument of V2. Non-occurrence of O2 is due to its co-referentiality to O1, which undergoes anaphoric ellipsis under temporal sequence constraint (Chang 1990). See a complete discussion regarding this phenomenon in Sections 10.2.2 and 10.3.4.

MC

Purposive SVC

(29) *Ta mai dongxi chi.*

3SG buy food eat

'S/he buys food to eat.'

Likewise, the Caused-Motion SVC also forms on the basis of subject argument fusion. In the Caused-Motion sub-type of core SVC (Ch. 9), although O1 is interpreted as the undergoer of V1 and an actor that takes part in the motion event denoted by V2 (with a locative argument), no obligatory topicalisation of O1 is involved in the construction. As I argue in Ch. 9, such a caused-motion meaning is only obtained in semantics of the

SVC, not outside the SVC. To be more precisely, O1 itself does not function as an argument of V2 in the second core, as V2 denotes a self-propelled motion and always requires a subject argument with high agency. That is, the Caused-Motion SVC is structurally different from the ESVC and the RSVC in that it forms via subject argument fusion. Consequently, despite the interpretation of O1 as an actor in the caused motion event in the Caused-Motion SVC, there is no obligatory topicalisation of O1 observed in the construction. For more details, see Section 9.3.4.

Unlike these core types of SVC, it can be seen that, in the ESVC, the undergoer argument has different syntactic functions in the two cores as far as the syntactic level of the argument structures is considered. That is, in the first core of the ESVC, the undergoer argument is the object argument of the activity V1 at its syntactic level of argument structure. In the second core, the undergoer argument is the subject argument (and the only argument) of the stative V2-*le* at the syntactic level of argument structure. For example, the undergoer argument *keng* ‘hole’ in (19) is the object argument of V1 *wa* ‘dig’, which is the nucleus predicate in the first core. It is also the subject argument of the V2-*le*, i.e., *qian-le* ‘be too shallow’, the nucleus predicate in the second core.

With two structurally different cores in the ESVC, to coindex the identical arguments in their separate argument structures must be conducted in a different way from the one observed in the other core types of SVC discussed previously. The fixed position of the undergoer argument in the ESVC must be jointly determined by the two structurally different cores. This can be seen in two respects. First, although the undergoer argument functions as the object argument in the argument structure of the first core, it is simultaneously the subject argument in the argument structure of the second core. Consequently, this undergoer argument cannot be placed after V2-*le* in the Excessive SVC, as shown in (21)-(23). Secondly, take (30) as an example, it can be seen that the position between the two serial verbs in the ESVC is not available for the undergoer argument to let it simultaneously function as the object of the first core and the subject of the second core.

MC

(30)**Tamen wa keng qian le*
they dig hole be.shallow LE

Intended: ‘The hole, they have dug it too shallow.’

Therefore, the only way to make the reference of the undergoer argument simultaneously accessible for the two structurally different cores appears to be topicalising it to a position before V1. By doing so, the two cores (or their argument structures) in the ESVC are linked via argument coindexation (i.e., coindexing two identical arguments and realising only one of them in the syntax). For the same reason, some JSM expressions of the Resultative SVC also require the undergoer argument to be always topicalised (see Section 6.3.4).

Therefore, the characteristic of obligatory topicalisation of the undergoer argument in the ESVC and the RSVC correlates with their structure of the core SVC. Precisely, the syntactic argument function of the undergoer argument is not the same with regard to the two cores in the core SVC. This undergoer argument is the object argument of the activity V1 in the first core and simultaneously the subject argument of the stative V2-*le* in the second core. While MC does not have a morphological means of marking such a functional difference of the same argument on verbs or on an argument that occurs between the two verbs, it seems to be a language-specific way to make the reference of the undergoer argument simultaneously accessible for the two structurally different cores by topicalising it to a position before V1. By doing so, the two cores in the ESVC are also connected via argument fusion (i.e., coindexing/fusing two identical arguments (the undergoer) and realising only one of them in the syntax). This is in contrast with the flexible positions that an undergoer argument may have in the C-E SVC, which functions as a single verb with regard to topicalisation of the undergoer argument (see Section 4.3.4). (In Section 11.2.3, there is a discussion about the position of this obligatorily topicalised undergoer argument in the SVC.)

7.3.5 Interim Summary

In this section, I have shown that the ESVC is structurally different from the C-E SVC in that it has a looser structure, which contains two cores. The two cores can be separated from each other by means of inserting an intensifier between them or coordinating *V2-le* independently from V1 in the SVC. The two cores also jointly determine the fixed position of the undergoer argument to make its reference simultaneously accessible for the structurally different cores. These characteristics are not observed in the C-E SVC.

7.4 Summary

This chapter discusses a distinct type of the core SVC: the Excessive SVC (or the ESVC). This SVC is another example of the phenomenon whereby the same string of verbs can occur in different structures.

With regard to the inter-clausal diagnostics, the monoclausality of the ESVC is revealed. Despite its superficial resemblance to the C-E SVC, the ESVC exhibits distinct syntactic and semantic characteristics from the latter. With regard to the intra-clausal diagnostics, the ESVC demonstrates characteristics of a looser structure in a comparison with the C-E SVC as the two component verbs of the ESVC can be separated from each other by an intervening degree adverb *tai* ‘too’ or coordination of *V2-le* independent from V1 within the SVC. These behaviours of the ESVC cannot be observed in the C-E SVC, in which the serial verbs have merged into a tight unit and can by no means be separated from each other. It is also observed that unlike the undergoer argument in the C-E SVC which undergoes optional topicalisation, the undergoer argument of the ESVC must be topicalised before V1. I argue that this fixed position of the undergoer argument in the ESVC correlates with its different syntactic functions in the two cores in the construction. While there is no morphological means in MC to mark the different

argument functions (or statuses) of the undergoer argument with respect to two cores, the fixed topicalised position is utilised by the ESVC in order to make the reference of this undergoer argument simultaneously accessible for both cores.

Chapter Eight: Instrumental Serial Verb Construction

8.1 Introduction

The Instrumental SVC (hereafter ISVC) is commonly found in serialising languages, such as Barai (Foley and Olson 1985, 44), Saramaccan, Akan (Arends et al. 1994, 107), òbòlò (Durie 1997, 335-336) and Tetun Dili (Hajek 2006, 244). It is considered as a means to increase the valency of the construction by introducing an instrumental argument into the construction (Aikhenvald 2006, 25-26). In the typological study of Aikhenvald (2006, 26), the ISVC is considered as a type of *Asymmetrical type* of SVC, as the component verb that introduces the instrumental argument comes from a limited range of activity verbs, usually *take* and *use* verbs. This is in contrast to the other verb in the ISVC that denotes an activity, for which there is a relatively larger number of candidates. In the ISVC, each verb is followed by its own object argument and the verbs share the actor argument, which is the subject in the construction. The minor verb that comes from a limited range of verbs is *yong* ‘use’ or *na* ‘take’ in MC, as shown in (1), and *ing* ‘use’ or *kiah* ‘take’¹⁰² in JSM, as shown in (2).

MC

- (1) *Wo yong/na dao qie le rou.*
I use/take knife cut PFV meat
I cut the meat with a knife.

JSM

- (2) *Abu kiah/ing phothau phua tsha.*
mother take/use axe chop braches

¹⁰² In JSM, there is another morpheme *an* that may introduce an instrumental argument. This morpheme however, does not occur with a verbal aspectual marker, such as *leh* (progressive marker) or *tioh* (experiential marker). Moreover, it cannot be used on its own. Therefore, it does not possess verbal status and should not be considered as a verb.

‘Mother chopped the branches with an axe.’

00:10:16.350 - 00:10:18.660 (*kiah* ‘take’)

00:10:41.464 - 00:10:43.514 (*ing* ‘use’)

MT 98-105 140614_03 15-5-14

From the above examples, it can also be seen that, as in many other serialising languages, the ISVC is expressed in non-contiguous serialisation in both MC and JSM: each verb takes a distinct object. Causally motivated, the event denoted by the ISVC involves an overlapping temporal structure of the sub-events: using an instrument and acting on the patient. The action of picking up an instrumental always precedes the action performed with that instrument. In the ISVC, V1 introduces the instrumental argument, such as *yong* ‘use’ and *na* ‘take’ in MC, or *ing* ‘use’ and *kiah* ‘take’ in JSM, and V2 denotes an action on the undergoer argument, conforming to the iconic principle (Tai 1985). This linear arrangement of verbs in the Instrumental SVC is also found cross-linguistically (Durie 1997, 335-336).

Introducing an instrumental argument, V1 may be reminiscent of its semantic correspondent in English that involves a prepositional phrase (Lord 1973, 270, Li and Thompson 1989, 367). However, the verbal properties of V1 in the ISVC suggest that it should be analysed as a component serial verb rather than a preposition. As expressions (3)-(5) show, V1(s) in (1) and (2) can function as a single predicate in a clause. In particular, these verbs can be marked by an aspectual marker, perfective or progressive.

MC

(3) *Wo yong/na le dao.*

I use/take PFV knife

‘I use/take knife.’

JSM

(4) *Abu ti leh kiann phothau*

mother PROG take axe

'Mother is taking the axe.'

00:16:25.990 - 00:16:27.900 MT 98-105 140614-03 15-5-14

(5) *Siang ing gua e thongsi?*

who use I POSS spoon

'Who used my spoon?'

00:54:27.669 - 00:54:29.539 MT 98-105 140614-03 15-5-14'

At the surface form, the ISVC may resemble the unmarked coordinate structure (Payne 1985a), but the construction should not be confused with coordination of two clauses. The two structures may look similar in that both of them involve some kind of coordination. However, the former exhibits a type of core coordination within a monoclausal structure and the latter is a coordination of clauses (Hopper 2008) (See Section 2.6.1 that I do not assume that the nexus types play a role in the application of the notions of *predicate fusion* and *argument fusion* in this study). Despite the similarity of having some kind of coordination, they can be differentiated in terms of whether the involved VOs are sharing a single clause boundary.

In this chapter, I will first show that the ISVC can be differentiated, in both MC and JSM, from superficially similar clausal coordinate structures in particular with regard to inter-clausal diagnostics. Secondly, I will show that the ISVC is a semantic sub-type of core SVC with regard to the intra-clausal diagnostics, in particular, the diagnostic of coordination within the SVC.

8.2 Inter-clausal diagnostics

8.2.1 Negation

As has been discussed in Section 2.5.1, bi-clausal structures allow independent (pre-V2) negation because the two clauses express distinct propositions. When pre-V2 negation

takes place, the verbs occur in a bi-clausal structure rather than an SVC.

MC

- (6) *Wo na dao, mei qie rou.*
I take knife NEG cut meat
'I took the knife, (and/but) I didn't cut the meat.'

JSM

(constructed)

- (7) *I kiah to, bo tsueh hiak.*
3SG take knife NEG cut meat
'S/he took the knife, (and/but) s/he didn't cut the meat'

The above two expressions involve a coordinate sentence rather than an SVC. This can be seen in that the expressions conform to the *CSC* (see Section 2.5.7): neither O1 nor O2 may be extracted from its conjunct, as shown in (8)-(11).

MC

- (8) **Dao, ta na, mei qie rou.*
knife 3SG take NEG cut meat
Intended: 'The knife, s/he takes/took, (s/he) does not cut meat.'

- (9) **Rou, ta na dao mei qie.*
Meat 3SG take knife NEG cut
Intended: 'The meat, s/he takes/took knife. S/he didn't cut.'

JSM

(constructed)

- (10) **To, I kiah, bo tsueh hiak.*
knife 3SG take NEG cut meat
Intended: 'The knife, s/he takes/took, (s/he) does not cut meat.'

- (11) **Hiak, I kiah to, bo tsueh.*
 meat 3SG take knife NEG cut

Intended: 'The meat, s/he takes/took knife. S/he didn't cut.'

Expressions (6) and (7) are constructed in the scenario that the two actions, i.e., take a knife and cut meat, are independent and not related. In fact, native speakers of the two varieties usually put an adversative conjunction word between the two clauses in (6) and (7), typically *danshi* 'but' in MC and *m kuh* 'but' in JSM, to make the sentences more coherent. Insertion of the conjunction word will also make the sentences semantically more explicit, if it was expected that someone would cut the meat with the knife after taking it, but the person did not. For example,

MC

- (12) *Wo na dao, danshi mei qie rou.*
 I take knife but NEG cut meat

'I take/took the knife, but I did not cut the meat.'

JSM

- (13) *I kiah to, m kuh bo tsueh hiak.*
 I take knife but NEG cut meat

'S/he takes/took the knife, but s/he did not cut the meat.'

In the ISVC, the negative morpheme can only be added before V1 (*mei* 'not' in MC and *bo* 'not' in JSM), which is compatible with different interpretations regarding the scope of negation. This varying scope of negation with a pre-V1 negative in the ISVC is not observed in bi-clausal structures. As can be seen in (14) and (17), the scope of pre-V1 negation includes V1O1, which is made explicit in a continuing clause. Note that V2 in the continuing clause may change accordingly in order to specify the action the subject would perform with a different instrument. For example, one would *qie* 'cut' with a knife, but *jian* 'cut' with scissors as in (14). Likewise, with an axe, one is more likely to

tsam ‘chop’ something but not *tsueh* ‘cut’ it as shown in (17). Sentences (15) and (18) show that with a pre-V1 negation, V2O2 or just O2 can be negated in the ISVC. Similarly, a continuing clause is used to clarify this narrow scope of negation. In (16) and (19), the whole construction is negated with a pre-V1 negative.

MC

(14) *Wo mei yong dao qie rou, wo na jiandao jian de.*

I NEG use knife cut meat I take scissors cut FOC

‘I didn’t cut the meat with the knife. I cut it with scissors.’

(15) *Wo mei yong dao qie rou, wo yong dao cai zhi de.*

I NEG use knife cut meat I use knife tailor paper FOC

‘I didn’t cut the meat with the knife. I tailored the paper with it.’

(16) *Wo mei yong dao qie rou. Wo dou bu zai chufang.*

I NEG use knife cut meat I even NEG at kitchen

‘I didn’t cut the meat with a knife. I am not even in the kitchen.’

JSM

(17) *Gua bo ing to tsueh hiak, gua ing phothau tsam e.*

I NEG use knife cut meat I use axe chop FOC

‘I didn’t cut the meat with a knife. I chopped it with an axe.’

00:04:12.687 - 00:04:27.819 LTS REC019 21-5-15

(18) *Gua bo ing to tsueh hiak, gua ing to tsueh kuelngke*

I NEG use knife cut meat I use knife cut cake

‘I didn’t cut the meat with a knife. I cut the cake with it.’

00:00:01.050 - 00:00:06.000 LTS REC019-1 21-5-15

(19) *Gua bo ing to tsueh hiak, gua tsama*
I NEG use knife cut meat I just.now

leh guakhau leh thittho
be.at outside PROG play

‘I didn’t cut the meat with a knife. I was outside, playing.’

00:10:01.969 - 00:10:08.244 LTS REC019 21-5-15

From the discussion above, it can be seen that the same string of verbs can either occur in the ISVC or a bi-clausal structure. Only the latter allows independent (pre-V2) negation, as can be seen by their ungrammaticality with regard to the diagnostic of applying the CSC (i.e., object extraction). Furthermore, the ISVC allows the pre-V1 negation to have different interpretations with regard to the scope of negation. In particular, the pre-V1 negation can negate the entire ISVC.

8.2.2 Passivisation of the object of V2

In contrast to the behaviour of object of V2 in the ISVC (or O2 in this case), when the same string of verbs occurs in a bi-clausal structure, O2 cannot be passivised (see Section 2.5.2). Suppose that the bi-clausal expressions in (20) and (21) are uttered in the context that the subject is committed to two duties: one is getting a particular knife that s/he bought from Amazon as a gift; the other is cutting the meat for a birthday dinner. In this case, it is made obvious that the two actions, i.e., taking the knife and cutting the meat, are independent from each other; in particular, the knife is not used to cut the meat.

If not marked with the conjunction word *bingqie* ‘and’ in MC or *kap* ‘and’ in JSM, expressions (20) and (21) are ambiguous, in that they may be interpreted as the ISVC. However, passivisation of O2 in the two expressions, illustrated in (22) and (23), shows that only the ISVC, not the coordinate structure, allows its O2 to be passivised. From

the interpretation of grammatical passivisation (i.e., interpretation b.), it can be seen that the two verbs must be interpreted as in an ISVC, rather than denoting two unrelated actions (interpretation a.), so that passivisation of the object of V2 is grammatical.

MC

- (20) *Wo na dao (bingqie) qie rou.*
I take knife and cut meat
'I take a knife and cut meat.'

JSM

(constructed)

- (21) *Gua kiah to (kap) tsueh hiak.*
I take knife and cut meat
'I take a knife and cut meat.'

MC

- (22) *Rou bei wo na dao (bingqie) qie le.*
meat PASS I take knife and cut PFV

- *a. Intended: 'The meat was taken a knife, and cut by me' (bi-clausal (marked with *bingqie* 'and'))
b. 'The meat was cut by me with a knife.' (ISVC (without the conjunction word))

JSM

- (23) *Hiak khih gua kiah to (kap) tsueh lo.*
meat PASS I take knife and cut DM

- *a. Intended: 'The meat was cut by me taking a knife.' (bi-clausal (marked with *kap* 'and'))
b. 'The meat was cut by me with a knife.' (ISVC (without the conjunction word))

In this section, I have shown that, with regard to the diagnostic of passivisation of the object of V2, the ISVC allows O2 to be passivised. In contrast, a bi-clausal structure

that contains the same string of verbs does not allow its O2 to be passivised.

8.2.3 Independent modification by temporal adverbial

The ISVC is monoclausal, in contrast to the coordinate structure. In a single clause, there should be only one temporal setting. While there are two clauses in coordinate structures, such as (20) and (21), each clause is able to take its own temporal information, which is expressed in the periphery of a clause (see Section 2.5.3 for details). We can see from (24) and (25) that, with a coordinate structure, each clause is able to take its own temporal adverbial. The action of taking the knife is modified by the temporal adverbial *gangcai* ‘just now’ (MC) or *tsama* ‘just now’ (JSM); the action of cutting the meat is modified by a different temporal adverbial *xianzai* ‘now’ (MC) or *tsetsun a* ‘now’ (JSM).

MC

(24) *Ta gangcai na dao, xianzai qie rou.*

3SG just.now take knife now cut meat

‘S/he took the knife just now. And s/he will cut the meat now.’

JSM

(25) *I tsama kiah to, tsetsun a tsueh hiak.*

3SG just.now take knife now cut meat

‘S/he took the knife just now. And s/he will cut the meat now.’

00:00:00.790 - 00:00:06.790 LTS REC019-2 21-5-15

The bi-clausal structure can be diagnosed with passivisation of the object of V2 (Section 8.2.2). As can be seen in (26) and (27), O2 in the bi-clausal (24) and (25) cannot be passivised.

MC

- (26) **Rou bei ta gangcai na dao, xianzai qie (le).*
meat PASS 3SG just.now take knife now cut PFV

Intended: ‘The meat has been cut now by me taking the knife just now.’

JSM

- (27) **Kiak khih I tsama kiah to,*
meat PASS 3SG just.now take knife

tsetsun tsueh (hosei lo).

now cut be good PFV

Intended: ‘??The meat has been cut by me taking the knife just now.’

In addition to their failure of passivisation, the resulting expressions are subject to the CSC, as neither object can be extracted. Violation of this constraint also shows that (24) and (25) are not SVCs, but a coordinate structure. Ungrammatical expressions of extraction are provided in (28)-(31).

MC

- (28) **Dao, ta gangcai na¹⁰³, xianzai qie rou.*
knife 3SG just.now take now cut meat

Intended: ‘The knife, s/he took just now, and has cut the meat now.’

- (29) **Rou, ta gangcai na dao, xianzai qie.*
meat 3SG just.now take knife now cut

Intended: ‘The meat, s/he took the knife, is now cutting (it).’

¹⁰³ The first clause is only grammatical on the occurrence of a perfective aspectual maker *le* that occurs after the verb *na* ‘take’. The occurrence of the aspectual marker however would result in an apparently different surface form from the one of the original SVC. Therefore, I do not illustrate it here.

JSM

(30) **To, i tsama kiah, tsetsun tsueh hiak.*

knife 3SG just.now take now cut meat

Intended: 'The knife, s/he took just now, and has cut the meat now.'

(31) **Hiak, i tsama kiah to, tsetsun tsueh.*

meat 3SG just.now take knife now cut

Intended: 'The knife, s/he took just now, and has cut the meat now.'

In sum, the ISVC can only be modified by one temporal adverbial. As I have shown above, the same string of verbs that occur in the ISVC can also occur in a bi-clausal structure which, however, allows each clause to be modified by a distinct temporal adverbial.

8.2.4 Independent marking of viewpoint aspect

The ISVC must have only one viewpoint aspectual value and this value should only be marked once in the construction. This can be seen in expressions (1) and (2) at the beginning of the chapter. Expression (1) (MC), marked by the perfective marker *le*, should only be interpreted as that the action of using the knife to cut the meat has finished before the speech time. As noted in Yuan (2001, 270-271) and Shi (2014), the perfective aspect in STM is not necessarily marked by a corresponding aspectual marker, such as *le* in MC (see a brief discussion in this regard in Section 3.3.2.4.3). However, it is still clear enough for the native speakers to interpret that the event denoted in (2) has been accomplished before the speech time. Therefore, the ISVC in (2) has only one viewpoint aspectual value.

With different viewpoint aspectual values, the two cores in fact denote two separate actions, which are construed in two different clauses respectively. This is shown in (32) and (33).

MC

- (32) *Wo na le dao, zai qie rou.*
I take PFV knife PROG cut meat
'I took a/the knife, and am cutting meat.'

JSM

- (33) *Tsit ki phothau i tshinma kiann khi,*
this CLF axe 3SG just.now take go

tshinma leh phua tsha
now PROG chop branches

'This axe, s/he took it just now, and is now chopping branches.'

00:25:24.698 - 00:25:28.378 MT 98-105 140614-03 15-5-14

Each of the expressions (32) and (33) denotes two actions. The first action is completed; the second one is ongoing. Evidence suggesting a bi-clausal structure in the two expressions comes from two observations: first, the two clauses are highly likely to be separated by a prosodic break (see Section 2.5.6). Second, there is no entailment in the sentences that the tool the subject obtained in the first action is necessarily used as the instrument to perform the second action. For example, it is highly likely that the subject got a new knife as a gift, but decided to use an old knife to cut the meat. Alternatively, someone got an axe at an earlier time, but s/he is chopping the branches with a light chopper. The cancellation test in (34) shows that sentence (33) can be followed by a continuing clause with no conflict in meaning, which specifies the instrument *tshato* 'chopper' used to chop the branches, distinct from the tool *phothau* 'axe' introduced in the first clause. Therefore, sentence (33) denotes two mutually unrelated actions, each of which is construed in a single clause.

JSM

(constructed)

(34) (33), (*m kuh*) *I leh ing tshato phua tsha.*

but 3SG PROG use chopper chop branches

‘(33), but s/he is chopping the branches with a chopper.’

Moreover, it is evident in the JSM example (33) that two different temporal adverbials, *tshinma* ‘just now’ and *tsinma* ‘now’, are used to highlight the temporal location of the actions. Modification by different temporal adverbials has already been shown to be associated with a bi-clausal structure in Section 8.2.3.

The ISVC only allows one aspectual marking. Double marking of the same viewpoint aspectual information is grammatical in a bi-clausal structure. In MC, marking each component verb with a perfective aspectual marker *le* is grammatical in a coordinate structure, as argued in Hwang (2008, 32). As s/he points out, this coordinate sentence (zero marking) is characterised by a prosodic break between O1 and V2 in (35), i.e., between the two clausal conjuncts. In addition, I find that expression (35) does not pass the inter-clausal diagnostic of passivising the object of V2 proposed in Section 2.5.2 (see also Section 8.2.2), as shown in (36).

MC

(35) *Ta na le dao qie le rou.*

3SG take PFV knife cut PFV meat

‘S/he took the knife and cut the meat.’

(36) **Rou bei ta na le dao qie le.*

meat PASS 3SG take PFV knife cut PFV

Intended: ‘*The meat was taken a knife by him/her and cut.’

Since the perfective aspect in JSM is usually left unmarked, I use the experiential aspect marker *tioh* instead to test the structure that accommodates identical viewpoint aspect

marking on each verb (see Section 3.3.2.4.4). It is grammatical to say that someone did use a knife and s/he did cut some carrots in (37). A conjunction word *koh* ‘and’ is used between the two clauses. The ungrammaticality of passivising O2 is shown in (38).

JSM

(37) *Gua tinnken ing tioh hit ki to (koh)*
 I in.the.morning use EXP that CLF knife and

tsueh tioh lataktshai.

cut EXP carrot

‘In the morning, I used the knife and cut some carrots.’

00:05:36.795 - 00:05:41.795 LTS REC018 06-06-15

(38) **Tsuai e lataktshai khiah gua tinnken ing tioh hit*
 these carrot PASS I in.the.morning use EXP that

ki to (koh) tsueh tioh.

CLF knife and cut EXP

Intended: ‘*Those carrots have been used a knife by me in the morning and have been cut.’

This is in contrast to the ISVC where only one marking of experiential aspect occurs, as shown in (39). In (40), O2 can be passivised in the ISVC, which is marked by the experiential aspect once, compared with (38).

JSM

(39) *Gua pat kiah pothau phua tioh tsha*
 I before take axe chop EXP branches

‘I chopped the branches with an axe before.’

00:15:41.070 - 00:15:43.310 LTS REC022 21-5-15

- (40) *Huai e tsha kkih gua kiah tsit ki pothau phua tloh.*
 those branches PASS I take that CLF axe chop EXP
 ‘Those branches were chopped by me with an axe before.’
 00:17:16.450 - 00:17:19.740 LTS REC023 21-5-15

The ISVC in MC and JSM can only be marked by the viewpoint aspect marker once in the construction. In contrast, a bi-clausal structure may allow each clausal conjunct to be marked by a viewpoint aspect marker regardless of whether the value of the viewpoint aspect in each clause is the same or not.

8.2.5 Independent modification by manner adverbial

Only in a bi-clausal structure can the verbs be modified by different manner adverbials (see Section 2.5.5). Reflected in the representation of our cognition of the actions or events, modification by different, or even semantically opposite, manner adverbials suggests that each of the actions is independent and should be segmented from another action that is performed in a distinct manner.

Related MC data have been discussed in Section 2.5.5 and I do not repeat them here. This section focuses on the behaviour of the same string of verbs in JSM with regard to modification by different manner adverbials. As shown in (41), V1 *kiah* ‘take’ is modified by the manner adverbial *ban a* ‘slowly’, while the manner of the action denoted by V2 is specified by an adverbial-like clause *a ia kin* ‘very quickly’, denoting a semantically opposite manner to *ban a* ‘slowly’. Note that the two clauses are connected by the adversative conjunction word *m kuh* ‘but’.

JSM

- (41) *I (kiah to) ban a kiah, m kuh tsueh hiak*
 3SG take knife slowly take but cut meat

tsueh a ia kin.

cut SUBORD very quickly

‘S/he took the knife very slowly, but s/he cut the meat very quickly.’

00:00:00.620 - 00:00:06.800 LTS REC019-3 21-5-15

The cancellation test shows that the ISVC accepts modification by only one manner adverbial. A continuing clause that modifies V2 by a manner adverbial that is distinct from the adverbial occurring before V1 in the ISVC is unacceptable.

JSM

(42) *I ban a kiah to tsueh hiak, *(m kuh I*
3SG slowly take knife cut meat but 3SG

tsueh hiak tsueh a ia kin).

cut meat cut SUBORD very quickly

Intended: *‘S/he cut the meat with a knife very slowly, but s/he cut the meat very quickly.’

Only a bi-clausal structure allows each clause to be modified by a distinct manner adverbial, in contrast to the ISVC in both varieties. In the ISVC, modification by a manner adverbial has scope over the whole construction. Neither core of the ISVC can receive an independent modification by a distinct manner adverbial.

8.2.6 Prosodic structure

The diagnostic of tone sandhi does not apply here (see a related discussion in Section 2.5.6). Nevertheless, it is highly unlikely for the native speakers to have a prosodic break within the ISVC.

8.2.7 Interim Summary

From the discussion above, it is noteworthy that the same string of verbs can occur either in the ISVC or in a bi-clausal structure. It can be seen that the ISVC differs from bi-clausal structures, in particular the unmarked coordinate sentence, with regard to the inter-clausal diagnostics proposed in Section 2.5. However, not much clear evidence can be provided with regard to the diagnostic of tone sandhi. Nevertheless, it is probable for a native speaker to place a prosodic break between two clauses rather than between the verbal constituents in the ISVC.

8.3 Intra-clausal diagnostics

Evidence showing that the ISVC is a sub-type of core SVC can be seen primarily with regard to two diagnostics, passivisation of O1 and coordination within the SVC respectively. It will be shown in this section that, in the ISVC, argument fusion takes place in this core SVC: the first verb may keep O1 in its own argument domain rather than making it visible to the operation of the construction, i.e., passivisation, as opposed to O2 (for a detailed discussion of this type of MVC formation, see Sections 2.6.2 and 2.6.6). The diagnostic of coordination within the SVC typically differentiates this type of core SVC from the nuclear SVCs in that, while the latter does not allow either of its component verbs (with or without the object argument) to be coordinated with another verb, the ISVC allows V1O1 or V2O2 to be individually coordinated within the SVC.

8.3.1 Passivisation of O1

It is evident that each of the two serial verbs in the ISVC takes a distinct object in MC and JSM. The subject arguments of the two cores are coindexed. In the following I will show that the two objects in the ISVC do not have equal status with regard to their ability to be passivised. This split behaviour between the objects suggests that V1 in this

ISVC has a partly independent status in terms of argument structure. The ISVC forms via argument fusion not predicate fusion.

The object status of these two object arguments in the ISVC is not the same. In particular, compared with O2 (see Section 8.2.2), O1 is not amenable to passivisation, as shown in (43) and (44), a characteristic of an asymmetrical language (cf. Bresnan and Moshi 1990).

MC

- (43) **Na ba dao bei wo yong qie le rou.*
that CLF knife PASS I use cut PFV meat
Intended: ‘The knife was used by me to cut the meat.’

JSM

- (44) **Tsit ki to khih gua ing tsueh hiak (lo).*
this CLF knife PASS I use cut meat DM
Intended: ‘The knife was used by me to cut the meat.’

With respect to the diagnostic, it can be seen that O1 in either variety is consistently not able to be passivised, as shown in (43) and (44), as opposed to the patient argument (O2).

As I have argued in Section 8.1, V1 in the ISVC is a verb on a par with V2. Each verb in the ISVC may take an affected argument. With regard to V1 on its own, its affected argument is passivisable, which I illustrate with MC data.

MC

- (45) *Dao bei wo yong/na le.*
knife PASS I use/take PFV
‘The knife was used/taken (away) by me.’

As shown in (45), this affected argument is passivisable with V1 on its own. However, as discussed earlier, this argument cannot be passivised within the ISVC. While the ISVC consists of two coordinated cores linked via argument fusion (see Sections 2.4, 2.6.2 and 2.6.6), the affected argument O1 (usually interpreted as the instrument) must be contributed from the partly independent argument structure of V1, thus not being able to be accessed in passivisation in the SVC.

8.3.2 Insertion of intervening material

The position of O1 after V1 and before V2 in the ISVC indicates the status of the core SVC. See Section 2.7.2.2 for more details on the non-contiguity between serial verbs as a sufficient intra-clausal criterion of the status of a core SVC.

8.3.3 Coordination within the SVC

As discussed in Section 2.7.2.3, the ISVC in MC allows either core to be coordinated with the instrumental meaning maintained in the resulting expression. The examples illustrating the SVC-internal coordination are repeated in (46) and (47), which illustrate coordination of V1O1 and coordination of V2O2 respectively.

MC

(46) *Tamen jiao ni yong shaozi, yong kuaizi, chi dongxi.*
 they teach you use spoon use chopsticks eat food
 ‘They taught you to eat food with spoons or chop sticks.’

(47) *Wo yong shaozi chi dongxi haiyou xiaochu yandai.*
 I use spoon eat food and erase eyebag
 ‘I ate food and erased eyebags with a spoon.’

JSM likewise allows either core in the ISVC to be coordinated. Expression (48) is

elicited on the basis of expression (46), which coordinates V1O1 with a paralleling verbal constituent *ing ti* ‘use chopsticks’. Expression (49) is said by the speaker after he is informed with the knowledge that using left hands may be good for our brain function. In this expression, V2O2 *sia li* ‘write character’ is coordinated with *thue bengkiann* ‘fetch things’.

JSM

(48) *Banthenng kap Poli ka Sionsiong ing thongsi a*
 PN and PN teach PN use spoon

ing ti tsiah (png)...

use chopsticks eat meal

‘Banthenng and Poli taught Sionsiong to have meal with spoon and/or with chopsticks’

00:01:24.540 - 00:01:31.620 LTS REC022 21-5-15

(49) *Lan tloh tsingsiong ing totshiu*
 we should usually use left.hand

sia li, thue bengkiann.

write character fetch thing

‘We should usually write characters and/or fetch things with our left hands.’

00:02:41.947 - 00:02:44.967 LTS REC022 21-5-15

In (49), the object argument *tothsiu* ‘left hand(s)’ in the first core of the ISVC should be understood as the instrumental argument related to the coordinated V3O3. The cancellation test in (50) shows that the instrumental interpretation of O1 in the action denoted by V3O3 cannot be cancelled.

JSM

(50) (49), **m kuh thue bengkiann si ing tsianntshiu.*

but fetch thing FOC use right.hand

Intended: ‘(49), but (we should) fetch things with our right hands.’

8.3.4 Obligatory topicalisation of the undergoer argument

The diagnostic of obligatory topicalisation of the undergoer argument does not apply in this case. As I have shown in the original expressions (1) and (2), the ISVC is expressed in the SVOVO order in both MC and JSM. That is, the two undergoer arguments do not undergo obligatory topicalisation. To be more precise, O1 in the ISVC cannot be extracted, while O2 in the ISVC is optionally topicalised. It suggests that each verb in the ISVC has its own object, and the ISVC forms on the basis of fusing the subject argument at the syntactic level of argument structure of each component verb (see Sections 2.4, 2.6.2 and 2.6.6 for details on argument fusion).

MC data concerning the ungrammaticality of topicalising O1 and the grammaticality of optional topicalisation of O2 in the ISVC can be found in Section 2.7.2.4. Expression (51) was constructed by topicalising O1 *tsit ki thongsi* ‘this spoon’ in the ISVC, and was rejected by native speakers of JSM. In contrast, (52), in which O2 *tsit liap kuelng* ‘this egg’ is topicalised, is acceptable.

JSM

(51) **Tsit ki thongsi Sionsiong ing tsiah (liau) tsit liap kuelng.*

this CLF spoon PN use eat finish one CLF egg

Intended: ‘The spoon, Sionsiong ate an egg with (it).’

(52) *Tsit liap kuelng Sionsiong ing thongsi tsiah.*

this CLF egg PN use spoon eat

‘This egg, Sionsiong ate (it) with a spoon.’

8.3.5 Interim Summary

In this section, I have shown that the ISVC demonstrates characteristics of core SVC in that the component verbs, in particular V1, have partly independent status in terms of argument structure. With regard to the diagnostic of passivisation of O1, it can be seen that, in contrast to the behaviour of O2, it stays within the argument domain of V1 and is not accessible to the syntactic operation. Moreover, either core in the ISVC can be coordinated without cancelling the constructional meaning.

8.4 Summary

This chapter discusses a semantic sub-type of core SVC: the Instrumental SVC (ISVC), in MC and JSM. It meets the criterion of monoclausality with regards to the inter-clausal diagnostics (see Section 8.2). It also demonstrates characteristics of core SVC with regard to the intra-clausal diagnostics (see Section 8.3).

With inter-clausal diagnostics, the ISVC can be differentiated from the superficially similar clausal coordinate structure, in particular when the same string of verbs can occur either in the ISVC or in the clausal coordinate structure. It is noteworthy that, with regard to intra-clausal diagnostics, the ISVC shows that V1 has partly independent status in terms of argument structure, as it keeps O1 in its argument domain and O1 is therefore invisible to the operation of passivisation. Moreover, either core in the ISVC may participate in coordination within the SVC suggesting they form a looser structure than the nuclear SVCs, the component verbs of which cannot be separated from each other by any means.

Chapter Nine: Caused-Motion Serial Verb Construction

9.1 Introduction

This semantic type of SVC (CSVC hereafter) is found in many serialising languages, such as Paamese (Crowley 2002), White Hmong (Jarkey 2010, 2015) and Jarai (Jensen 2014). It is also attested in both MC and JSM. V1 is transitive and takes a theme argument O1, such as ‘buy’, ‘load’ and ‘select’. V2 denotes direction or location, such as ‘come, return’ and ‘arrive’. Some V2s may take a locative argument in the CSVC, for example, in *mai hua hui sushe* ‘lit. buy flower return dorm’ (MC). The CSVC is also treated as a type of ditransitive construction in the analysis of Malchukov et al. (2010, 13-14), which treats O2 as a “goal-like recipient” argument in the CSVC.

According to the classification criterion in Aikhenvald (2006, 21-23), the CSVC is an asymmetric type. V1 comes from the class of activity verbs, whereas V2 comes from a semantically restricted class, which consists of a few verbs denoting directions, such as ‘go’, ‘come’, and ‘return’. Expressions of the CSVC in MC and JSM are given in (1) to (6).

MC

(1) *Lisi mai hua qu sushe le.*

Lisi buy flower go dorm PFV

‘Lisi bought flowers and took them to the dorm.’

(2) *Zhe ge ren meitian jiao chashui dao huapen li.*

this CLF person everyday water tea.water be.at flowerpot inside

‘This person pours tea water into the flowerpot every day.’

- (3) *Ta tiao ji zhi xiaoji hui jia le.*
 3SG select several CLF chicken return home PFV
 ‘S/he selected several chickens and took them back home.’

JSM

- (4) *I bue hue lai soksia leh.*
 3SG buy flower come dorm
 ‘S/he bought some flowers and took them to the dorm.’
 01:44:39.967 - 01:44:42.297 MT 106-143 140615-01 16-5-14

- (5) *(I) tann tsha lipkhi tshulai.*
 3SG load branches enter.go house
 ‘S/he loaded some branches and took them to the house.’
 00:07:58.926 - 00:08:01.316 LTS 150606-02

- (6) *(Abu) kuinn kui tsiah ah a tolai tshulai*
 Mother select some CLF duckling return house
 ‘S/he selected some ducklings and took them back to the house.’
 00:19:14.822 - 00:19:16.932 LTS 150606-02

V1s *mai* ‘buy’, *jiao* ‘water’ and *tiao* ‘pick’ in (1)-(3) are activity verbs. They simply denote an action. In these expressions, V2s are followed by a locative NP denote a direction or a location, such as *qu sushe* ‘go to the dorm’, *dao huapenli* ‘into the flowerpot’ and *hui jia* ‘go back home’. Similarly, in JSM examples (4)-(6), V1 denotes a particular action, such as *bue* ‘buy’, *ta* ‘load’ and *kuinn* ‘pick’. V2 and its locative NP denote a direction¹⁰⁴, such as *lai soksia leh* ‘come to the dorm’, *lipkhi tshulai* ‘enter the house’ and *tolai tshulai* ‘return to the house’.

¹⁰⁴ My data show that there are no JSM equivalents for MC expressions of the CSVC in which V2 is *dao* ‘arrive’ introducing a location.

Examples of the use of component verbs of the CSV on their own are provided below. In (7) to (13), each verb is followed by an NP in a single clause. The verbal status of these verbs can be seen in their ability to take an aspectual marker: *le* as the perfective aspectual marker in MC, *leh* as the progressive aspectual marker in JSM and (*pat...*)*tioh* as the experiential aspectual marker in JSM (see Section 3.3.2.4).

MC

(7) *Ta mai/tiao le yifu.*
 3SG buy/pick PFV clothes
 ‘S/he bought some clothes.’

(8) *Ta jiao le hua.*
 3SG water PFV flower
 ‘S/he watered the flowers.’

(9) *Ta qu/dao/hui le xuexiao.*
 3SG go/arrive/return PFV school
 ‘S/he went to/arrived at/returned to the school.’

JSM

(10) *I pat bue tioh sannkho.*
 3SG before buy EXP clothes
 ‘S/he has bought some clothes before.’
 00:24:24.092 - 00:24:26.282 LTS 150606-02

(11) *I leh ta tsha.*
 3SG PROG carry branches
 ‘S/he is carrying branches’
 00:29:21.824 - 00:29:24.364 LTS 150606-02

(12) *I tsetsun leh kuinn ah.*
 3SG now PROG select duck
 ‘S/he is now selecting ducks.’
 00:28:34.046 - 00:28:36.476 LTS 150606-02

(13) *I pat lai/(lip)khi/tolai tioh sin tshu.*
 3SG before come/enter.go/return EXP new house
 ‘S/he came to/ went into/came back to the new house before.’
 00:30:32.389 - 00:33:44.358 LTS 150606-02

Similar expressions of the CSV are also observed in Paamese, indicating participation of both the subject and the object of V1 in the motion denoted by V2. This semantic characteristic is specified in Crowley (2002, 41) as including a “conjoined participant”. This type of SVC is referred to as the “Cumulative Subject” SVC by Aikhenvald (2006, 18). The example in Paamese is provided in (14).

Paamese

(14) *ma-kuri-ko lo-va-haa*
 1sg+immed-take-2sg 1du/inc-immed-go
 ‘I will take you away with me’ (lit. I take you-we (dual inclusive) go)
 (Crowley 2002, 41)

In the Paamese expression, the co-participation of the arguments in the motion of going away is formally marked by an overt inc(lusive) or dual plural marking *lo-* before V2. In contrast, in MC and JSM, V2 is not explicitly marked for the number of actors in the motion sub-event, as can be seen in (1)-(6). In a later paragraph, I will show that the CSV in this chapter and the “cumulative subject” SVCs do not refer to the same phenomenon, as the referent(s) of the subject argument of each core in the CSV dealt in this chapter is/are identical, while the referents of the subject argument of each verb in the “Cumulative Subject” SVC in Paamese are only partly identical.

The CSV in MC and JSM does look similar to a clausal coordinate structure at the surface form as exemplified in (15). Compare (1) with (15).

MC

- (15) *Wo meitian mai hua (haiyou) qu sushe.*¹⁰⁵
 I daily buy flower and go dorm
 ‘I buy flowers and go to the dorm every day.’

Despite the formal similarity, through a comparison between the CSV in (1) and the very similar clausal coordinate in (15), it can be seen that there is a kind of caused-motion meaning correlated with the SVC structure. In a bi-clausal structure (the coordinate sentence) in (15), such a meaning is not obligatory and can be cancelled. More than likely, in such a bi-clausal structure, the optional caused-motion meaning is inferred from the speaker’s world knowledge. Expression (15) indicates that the subject needs to do two distinct and unrelated actions each day: to buy some flowers and to go to the dorm. The two actions are not related to each other. The flowers bought via the first action are not necessarily taken by the subject to the location *sushe* ‘dorm’ indicated in the second clause, as can be seen in (16), which cancels the caused-motion of flowers to the dorm. Contrastively, such a cancellation is odd to be added to expression (1), as shown in (17).

MC

- (16) *(15), hua mai le fang zai jiali, ranhou qu sushe.*
 flower buy PFV put at home.inside then go sushe
 ‘(15), The flowers are put at home after being bought. Then I go to the dorm.’

- (17) *(1), *danshi hua mei bei ta dai qu sushe.*
 but flower NEG PASS I take go dorm

Intended: ‘(Lisi bought some flowers and took them to the dorm), but the flowers

¹⁰⁵ The conjunction word *haiyou* ‘and’ is optional. When it is not used in the clausal coordinate structure, a prosodic break is observed between the two clausal conjuncts.

were not taken to the dorm by him.’

Likewise, in JSM, the meaning that O1 moves to the location denoted by O2 can also be cancelled in a coordinate sentence, as shown in a continuing clause in (18). By contrast, such a cancellation is not acceptable with the CSV in (4), as illustrated in (19).

JSM

(constructed)

(18) *I taklit bue hue kap khi soksia,*
3SG everyday buy flower and go dorm

m kuh hue khih I khong leh tshulai, bo thue khi soksia
but flower PASS 3SG put at house NEG take go dorm

‘S/he buys flower and goes to the dorm every day, but the flowers are put at the house by her rather than being taken to the dorm.’

(constructed)

(19) (4), **m kuh I bo tsiong hue thue lai soksialeh.*
but 3SG NEG PRE flower take come dorm

Intended: ‘(S/he bought some flowers and took them to the dorm), but s/he didn’t take them back to the dorm.’

As I have mentioned earlier, the term “Cumulative Subject” is used by Aikhenvald (2006, 18) to refer to the “conjoined participant(s)” in a caused motion event in a Paamese SVC, as shown in expression (14). She, however, at the meantime includes expressions such as (20) and (21) that seem to be of a different type under such a label.

Ewe

(20) *vã (né) míndzó*
2sg:come consec 1pl-leave

‘You come and let’s go’

(Ameka 2006)

Dumo

(21) ...*luh* *ni* *ya~ne-ne...*

2nsgsu.come 1pl.nct thing~1nsgsu.eat-REDUP

‘...You come (and) we’ll eat here!’

(Ingram 2006)

In the two expressions in Ewe and Dumo respectively, V1 is intransitive without any object. In addition, the caused-motion meaning is absent in these expressions, as the subject does not cause the other participants to undergo the motion denoted by V2. In (21), in particular, V2 does not denote any direction. Moreover, the subject did not come to “cause” all of the people to eat, if the translation is taken seriously. In addition, it can be seen from the examples in Ewe and Dumo that unlike the CSVC in MC and JSM, the referents of the subject argument of each verb in the “Cumulative Subject” SVCs are only partially identical. Therefore, the term “Cumulative Subject” SVCs itself does not refer to a homogeneous phenomenon and should be distinguished from what I include as the CSVC in this study.

In this chapter, I restrict myself to examining the serial verbs where V1 is an activity verb and V2 indicates a direction or a location. In the following sections of this chapter, I will show that with regard to the inter-clausal diagnostics adopted in my study, the CSVC can be distinguished from the superficially similar bi-clausal structures, in particular from the unmarked coordinate structure that consists of the same string of verbs that can occur in the CSVC. Moreover, the status of the core SVC of the CSVC will be revealed with regard to the intra-clausal diagnostics. It is noteworthy that either core in the CSVC can be coordinated without cancellation of the constructional meaning of the CSVC (i.e., caused-motion) on the coordinated core.

9.2 Inter-clausal diagnostics

Despite employing the same strings of verbs, the CSV in the two Sinitic varieties consistently show distinct behaviours from bi-clausal structures with regard to the inter-clausal diagnostics. An exception in the application of these diagnostics is that the CSV does not pass the diagnostic of passivising the object of V2. However, the inability of passivisation of O2 in this SVC is due to the semantic and syntactic properties of the locative NP.

9.2.1 Negation

Bi-clausal structures allow their second clausal conjunct to be negated independently of the first conjunct (see Section 2.5.1). This is illustrated in expressions (22) and (23). In JSM, either *bo* ‘not’ or *ia be* ‘not yet’ can be used to negate the second conjunct.

MC

(22) *Ta mai hua (hai) mei hui sushe.*

3SG buy flower yet NEG return dorm

‘S/he went to buy flowers and has not (yet) returned to the dorm.’

JSM

(23) *I bue hue bo/ia be tolai soksia leh.*

3SG flower buy NEG/yet NEG dorm

‘S/he went to buy flowers, and s/he didn’t return / has not yet returned to the dorm.’

00:06:03.860 - 00:06:05.660 LTS REC005 21-05-15

With regard to the CSC (see Section 2.5.7), (22) and (23) are diagnosed as clausal coordinates. As can be seen in (24)-(27), none of the objects in these expressions can be extracted and fronted to the sentence-initial position.

MC

(24) **Hua, ta mai¹⁰⁶ (hai) mei hui sushe.*

flower 3SG buy yet NEG return dorm

Intended: 'The flowers, s/he buys/bought, and s/he has not returned to the dorm.'

(25) **Sushe, ta mai hua (hai) mei hui.*

dorm 3SG buy flower yet NEG return

Intended: 'The dorm, s/he (went out to) buy flowers, and has not returned to (it).'

JSM

(26) **Hue, I bue bo/ia be tolai soksia leh.*

flower 3SG buy NEG/yet NEG return dorm

Intended: 'The flowers, s/he buys/bought, and s/he has not returned to the dorm.'

(27) **Soksialeh, I bue hue bo/ia be tolai.*

dorm 3SG buy flower NEG/yet NEG return

Intended: 'The dorm, s/he (went out to) buy flowers, and has not returned to (it).'

Unlike the clausal coordinate, SVCs allow pre-V1 negation with different interpretations regarding the scope of negation. The scope of negation with such a pre-V1 negation may vary from V1O1 (or its components), to V2O2 (or its components), or to the whole construction. In (28) and (31), O1 is negated; in (29) and (32), V2O2 is negated; In (30) and (33), the whole construction is negated. Different interpretations regarding the scope of pre-V1 negation in the CSVC are specified in a continuing clause.

MC

(28) *Lisi mei mai hua qu sushe, ta mai shuiguo qu sushe.*

Lisi NEG buy flower go dorm 3SG buy fruits go dorm

¹⁰⁶ Only with a perfective aspectual marker *le* after the verb *mai* 'buy' can the expression *Hua, ta mai le* 'the flowers, s/he bought' be grammatical.

‘Lisi didn’t buy flowers and take them to the dorm. He bought fruits and took them to the dorm.’

(29) *Lisi mei mai hua qu sushe, ta mai hua hui jia.*

Lisi NEG buy flower go dorm 3SG buy flower return home

‘Lisi didn’t buy flowers and take them to the dorm. He bought the flowers and took them back home.’

(30) *Lisi mei mai hua qu sushe. Lisi shenme ye mei zuo.*

Lisi NEG buy flower go dorm Lisi what also NEG do

‘Lisi didn’t buy flowers and take them to the dorm. He did nothing’

JSM

(31) *I bo bue hue tolai soksia leh, i bue tsit*

3SG NEG buy flower return dorm 3SG buy one

tei onglai tolai

CLF pineapple return

‘S/he didn’t buy flowers and take them to the dorm. S/he bought a pineapple and returned (to the dorm).’

01:48:34.210 - 01:48:38.710 MT 106-143 140615-01 16-5-14

(32) *(I) bo bue hue tolai soksia, i hue*

3SG NEG buy flower return dorm 3SG flower

bue khi sang lang la.

buy go send person DM

‘S/he didn’t buy flowers and take them to the dorm. The flowers, s/he bought them and sent them to others.’

01:48:00.205 - 01:48:03.865 MT 106-143 140615-01 16-5-14

(33) *I bo bue hue tolai soksia, i kongpen bo*
 3SG NEG buy flower return dorm 3SG even NEG

bue hue, khi leh khuann tianiann.

buy flower go PROG see film

‘S/he didn’t buy flowers and take them to the dorm. S/he didn’t buy flowers at all. S/he was/is away watching a movie.’

01:48:09.900 - 01:48:15.450 MT 106-143 140615-01 16-5-14

From the above discussion, it can be seen that the CSVC and the bi-clausal structures, the clausal coordinate structure in particular, can be distinguished with regard to the independent pre-V2 negation (or separate negation on component verbs). Despite employing the same string of verbs, only bi-clausal structures allow the second verbal constituent to be negated independently from the first one. Pre-V1 negation in the CSVC can negate the entire construction, while the clauses in a bi-clausal structure must be separately negated.

9.2.2 Passivisation of the object of V2

As shown in Section 2.5.2, bi-clausal structures systematically do not allow the object of V2 to be passivised across the clause boundary. However, this criterion should be applied with micro-variation with regard to a particular semantic type of SVC. In this section, we will see that in the CSVC, O2 (the locative NP) is not possible to be passivised due to its semantic-syntactic characteristics and its semantic role in the overall event denoted by the CSVC.

The theme argument (O1 in the CSVC) can be passivised, whereas the locative NP (O2 in the CSVC) cannot (cf. Section 9.3.1). The locative argument cannot be passivised either with the motion verb on its own, shown in (34) and (36), or in the CSVC, illustrated in (35) and (37).

MC

(34) **Sushe, bei ta qu/dao/hui le.*

dorm PASS 3SG go/be.at/return PFV

Intended: ‘*The dorm was gone in/returned/arrive by him/her.’

(35) **Sushe, bei ta mai hua qu le.*

dorm PASS 3SG buy flower go PFV

Intended: ‘*The dorm was gone in by him/her buying flowers.’

JSM

(36) **In soksia khih i tokhi (khi) lo.*

his/her dorm PASS 3SG return go DM

Intended: ‘*His/her dorm was returned by him/her.’

(37) **Soksia khih i bue hue tolai lo.*

dorm PASS 3SG buy flower return PFV

Intended: ‘*The dorm was returned by him/her buying flowers.’

It is usually the theme or the patient that functions as the subject in a passive construction. However, the locative NP is not passivisable, as it does not express any affectedness in the event as a theme or a patient argument does. There are only a few exceptions in English, such as *This bed was slept in* (Dixon and Aikhenvald 1997, 77, Keenan and Dryer 2007, 350), where the situational context and affectedness on the locative NP may still play a role. See a discussion in Siewierska (1984, 67-69) on passivisation of the locative arguments in English and Maori, based on the findings in Riddle et al. (1977) and Bolinger (1977). A similar point can also be found in Dixon (1992, 319-320).

During fieldwork, I indeed came across an example of passivising the locative NP in the CSVC in JSM. The speaker who provided this expression informed me of the

adversative nature of the event that is described by the passive. Note that *khi* ‘go’ in the first clause is a verb that indicates a direction or location rather than a phase marker *khi*. The latter must immediately follow a verb but not an argument in STM (see a brief discussion of its grammatical distribution in Lien (1995)).

JSM

(38) *Tshaikuan leh khih i bue tshai khi lo. Li m bian*
 Restaurant PASS 3SG buy food go DM you don’t.need.to

koh bue lo.

again buy DM

‘The restaurant has been bought and brought some food by him/her. So you don’t need to buy food again.’

00:00:06.547 - 00:00:09.767 LTS REC019 22-5-15

It is noteworthy that the passivised locative NP *tshaikuan leh* ‘restaurant’ in (38) should not be considered as a recipient-like argument introduced by V1 *bue* ‘buy’. First of all, *bue* ‘buy’ is not a ditransitive verb in JSM. There is no such an expression as **bue tshaikuan leh tshai* ‘lit. buy restaurant food’, which is intended to be a ditransitive construction and to interpret the locative NP (O1) as a “goal-like recipient” argument of the verb *bue* ‘buy’. Secondly, in Section 6.2.2, I have shown that the typical ditransitive verbs *tho* ‘give’ and *sang* ‘send’ in JSM do not allow their O1 (recipient argument) to be passivised when they are used on their own (cf. the English equivalent in Hudson (1992)). As a consequence, the recipient-like argument that functions as O2 (the recipient argument) in the ditransitive sub-type of the Resultative SVC, i.e., ‘send...give...’, cannot be passivised either. Therefore, passivisation of the argument *tshaikuan leh* ‘restaurant’ in the JSM CSVC in (38) cannot be accounted for by assuming that it is the recipient argument of a ditransitive verb (V1) or the recipient argument in a ditransitive construction (the CSVC).

In MC, it seems that the locative NP in the CSVC can hardly be interpreted as something affected, unlike in English. As can be seen in Section 9.1, V1s, such as *mai* ‘buy’ and *tiao* ‘pick’, simply denote an action without any causative or directional meaning. If such verbs occur as V1s in the CSVC, as shown in (39), the locative NP cannot be passivised, as shown in (40). The manner verb *kang* ‘carry on shoulder’ (V1) in (39) is the worst V1 in the passive (40) compared with the other two V1s.

MC

(39) *Ta mai/tiao/kang le yi dui dongxi*
 3SG buy/select/carry.on.shoulder PFV one CLF things

jinqu xin fangjian.

enter.go new room

‘S/he bought/selected/carried things and filled the new room with them.’

(40) *Xin fangjian bei ta ??mai/??tiao/*kang le yi*
 new room PASS 3SG buy/select/carry.on.shoulder PFV one

dui dongxi jinqu.

CLF thing enter.go

Intended: ‘The new room was filled in by things, which s/he ??bought/??selected/*carried on shoulder.’

It is noteworthy that the ungrammaticality in the passivisation of the locative NP may be removed when V1 comes from a semantic class that encodes a directional meaning in addition to an action meaning. This is illustrated in (41) and (42), where the argument *juben* ‘drama’ should be interpreted as the thing affected in the event of adding roles.

MC

(41) *Ta jia le jige juese jin juben.*
 3SG add PFV some role enter drama

‘S/he added some roles into the drama.’

- (42) *Juben bei ta jia le jige juese jin*(qu)/jin*(lai)*¹⁰⁷.
drama PASS 3SG add PFV some role enter.go/enter.come
‘The drama, some roles were added into it by him/her.’

Metaphorically, there is a directional meaning of V1 *jia* ‘add’. In (41), V1 *jia* ‘add’ introduces an argument that denotes something previously absent, in addition to the other existing things. This directional meaning entailed by the verb *jia* ‘add’ exists, as the verb does not co-occur with the verbs that denote an outward direction or a direction that is away from a deictic centre, such as *chuqu* ‘lit. exit.go’, or *xiaqu* ‘lit. descend.go’, suggesting their semantic incompatibility.

The inability of the locative NP in the CSVC to undergo passivisation may correlate with the fact that the locative NP is not an argument of the directional verb. In other words, the directional verbs, such as *hui* ‘return’, *qu* ‘go’ and *lai* ‘come’, are intransitive. According to Bisang (2006, forthcoming-a) and Lu et al. (forthcoming), the argument status of a given NP can be diagnosed with regard to the coreference of minimal headless relative clause (MHRC henceforth). For example, given a transitive verb *eat* ‘eat’ in MC, a MHRC formed on the basis of this verb and a general *wh*-word can be (43), which shares coreference with the subject; or (44), which shares coreference with the object.

MC

- (43) *chi de shi shemme?*
eat REL COP what
‘What is being eaten?’

¹⁰⁷ Disyllabic directional verbs must be used as V2s in the passive. However, more studies are needed to account for such a phenomenon.

- (44) *chi de shi shei?*
 eat REL COP what
 ‘Who is the one who eats?’
 (Bisang 2006, 204)

In contrast with the argument, a locative NP cannot be questioned with a general *wh-word* in the diagnostic of MHRC. For example, it is not possible to question the location of the action of eating by asking (45), which can only be interpreted as asking for the location of food.

MC

- (45) *chi de zai na?*
 eat REL at where
 * ‘Where is the place for eating?’
 only: ‘Where is the thing to be eaten/the food?’
 (Bisang 2006, 204)

Likewise, it is problematic to form a MHRC on the basis of a directional verb with a general question word attempted to question a non-subject NP taken by the directional verb in MC. For example, the MHRC in (46) can only be interpreted as referring to the subject of the directional verb *lai* ‘come’. It is unacceptable to interpret *lai de* ‘the one that came’ in the MHRC as a locative NP, which is not acceptable to be questioned by *zai na* ‘where’.

MC

- (46) *Lai de shi shui/shenme/zai na?*
 come REL COP who/what/at where
 ‘Who/what/where is the one that came?’
 * ‘Where is the place that one came to?’

From the above discussion, we have seen that the locative NP (a seemly O2) is not able to be passivised in the CSV C due to its semantic and syntactic characteristics. More importantly, as it has been shown with regard to the test of argumenthood, the locative NP in the CSV C is not an argument of V2. Although there might be an exception in JSM that allows the locative NP (which takes the place of O2) to be passivised, it requires a particular context and is, however, rarely attested in my data.

9.2.3 Independent modification by temporal adverbial

The same string of verbs that occur in the CSV C may accept modification by different temporal adverbials in a bi-clausal structure. This can be seen in (47) and (48), where the event of buying food happened today or will happen later today, but the event of going or getting back to the dorm or home will only happen tomorrow.

MC

(47) *Wo jintian mai cai mingtian qu sushe.*

I today buy food tomorrow go dorm

‘I bought/will buy some food today and I will go to the dorm tomorrow.’

JSM

(48) *Gua kinna bue tshai minna (beh) tokhi tshulai.*

I today buy food tomorrow want/will go house

‘I bought/will buy some food today and I will go back home tomorrow.’

00:00:00.540 - 00:00:05.840 LTS 017 10-09-15

As shown in the interpretations of (47) and (48), the reading of “caused-motion” in a bi-clausal structure does not exist. The absence of the “caused-motion” reading suggests that it is the CSV C that enforces the interpretation of O1 as the “subject” of V2, which is impossible in a bi-clausal structure.

In (49), O1 *cai* ‘food’ is not fronted as the topic for both conjuncts in the coordinate sentence. Despite its grammaticality with regard to topicalisation, it in fact functions as the topic of the first conjunct only (see translation a.). This topicalised object *cai* ‘food’ is not interpreted as related to the second conjunct *mingtian qu sushe* ‘go to the dorm tomorrow’, as the only participant who will go to the dorm is the subject *wo* ‘I’. The locative NP *sushe* ‘dorm’ is not able to be topicalised, as illustrated in (50).

MC

(49) *Cai, wo jintian mai mingtian qu sushe.*

food I today buy tomorrow go dorm

a. ‘The food, I bought/will buy it today. I will go to the dorm tomorrow.’
(bi-clausal)

*b. Intended: ‘The food, I bought/will buy (it) today and will go to the dorm (with it) tomorrow.’ (SVC)

(50) **Sushe wo jintian mai cai mingtian qu.*

dorm I today buy food tomorrow go

Intended: ‘The dorm, I buy/bought food today and will go (to it) tomorrow.’

Likewise, O1 *tshai* ‘food’ in the JSM equivalent is only fronted as the topic of the first conjunct. In (51), it is the subject *gua* ‘I’ who will *tokhi* ‘return’ to the location *tshulai* ‘house (or home)’. It is not possible to say **tshai, minna beh tokhi tshulai*, which means that the foods want/will go back home. Therefore, the item *tshai* ‘food’ denoted by the topicalised O1 does not participate in the motion event in this bi-clausal structure. As (52) shows, topicalising O2 *tshulai* ‘house’ makes the whole expression entirely ungrammatical.

JSM

(51) *Tshai, gua kinna bue minna beh tokhi tshulai.*

food I today buy tomorrow want/will return house

a. ‘The food, I bought/will buy it today. I will go back home tomorrow.’
(bi-clausal)

*b. Intended: ‘The food, I bought/will buy it today, and I will go back home with it tomorrow’ (CSVC)

00:00:01.210 - 00:00:05.990 LTS 020 10-09-15

(52) **Tshulai, gua kinna bue tshai minna beh tokhi (lo).*

house I today buy food tomorrow want/will return DM

Intended: ‘The house, I buy/bought food today, and (I) will return (to it) tomorrow.’

9.2.4 Independent marking of viewpoint aspect

In this section, I show that the CSVC can only be marked by an aspectual marker once. Marking the viewpoint aspect on each component verb is possible only in a bi-clausal structure, regardless of the value of the viewpoint aspect.

When both verbs, ‘buy’ and ‘go’, are marked by the same aspectual marker, the expression is bi-clausal. While the subject is optional in the second clause in MC, as shown in (53), it must be repeated in the second clause in JSM, as shown in (54). The obligatory occurrence of the subject argument in the second clausal conjunct in JSM indicates that the two conjuncts form a coordinate sentence, as opposed to SVCs, which require the subject to realise once in the process of argument fusion. See also Section 2.4 for a related discussion on the syntactic argument structure in SVCs and bi-clausal structures.

MC

(53) *Wo mai le cai. (wo) qu le sushe.*

I buy PFV food I go PFV dorm

‘I bought some foods, and I went to the dorm.’

JSM

(54) *Gua (u) bue tloh tshai. *(gua) (u) tokhi tloh tshulai.*

I have buy EXP food I have return EXP house

‘I have bought some foods before. And I have returned to home before.’

00:00:01.740 - 00:00:05.470

LTS 021 10-09-15

With different aspects, each of the expressions (55) and (56) contains a clause in the progressive aspect and a clause denoting a future event. The progressive aspect is marked by *zai* in MC and *leh* in JSM. The future event is signalled by *yao* in MC and *beh* in JSM. The second clause must be preceded by a temporal adverb *dengxia* ‘later’ in MC or *dan e* ‘later’ in JSM. If there is no such a temporal adverbial, a sentence final discourse marker, *le* in MC and *lo* in JSM, must be used. Otherwise, the expression sounds incomplete.

MC

(55) *Wo zai mai cai, *(dengxia) yao huiqu/ yao huiqu *(le).*

I PROG buy food later will return.go/ will return.go DM

‘I am not buying food, and will later go back.’

JSM

(56) *Gua leh bue tshai, *(dan e) beh tokhi/ beh tokhi *(lo).*

I PROG buy food later will return.go/ will return.go DM

‘I am not buying food, and will later go back.’

00:00:07.890 - 00:00:11.170

LTS 022 10-09-15

As discussed in the above data, marking viewpoint aspect on each component verb takes place in a bi-clausal structure, which either requires the occurrence of the subject in the second clause ((54) in JSM), or a temporal adverbial to connect the two clauses, or a sentence-final discourse marker. These requirements of grammatical elements in the bi-clausal expressions show distinct behaviours as opposed to the CSVC.

9.2.5 Independent modification by manner adverbial

In MC, verbal expressions *mai hua* ‘buy flowers’ and *hui sushe* ‘return to the dorm’ can be modified by distinct manner adverbials in a bi-clausal structure as shown in (57). The bi-clausal structure in (57) is reflected in two properties: first, it is highly likely for the native speakers to have a prosodic break before the second clause; secondly, the two distinct actions are conceived of as consecutive, i.e., the second action took place only after the first is completed. The temporal interval between the two consecutive actions can be explicitly expressed by the adverb *houlai* ‘later’. The occurrence of the temporal adverb, on the other hand, signals the different peripheries the two clauses have respectively, thus distinguishing them from the SVCs.

MC

- (57) *Ta feikuaide mai hua (, houlai) manmande hui sushe le.*
 3SG quickly buy flower later slowly returndorm PFV
 ‘S/he quickly bought some flowers, and later slowly returned to the dorm.’

The CSVC can only be modified by one manner adverbial that has the scope of modification over the whole construction, as shown in (58). A continuing clause shows that it is not acceptable to cancel the scope of modification by *feikuaide* ‘quickly’ on V2O2.

MC

- (58) *Ta feikuaide mai hua hui sushe le, danshi *(ta*
 3SG quickly buy flower return dorm PFV but s/he

shi manmande hui sushe de).
 FOC slowly return dorm FOC

Intended: ‘S/he quickly bought some flowers and took them back to the dorm, but

s/he actually got back to the dorm slowly.’

Expression (57) does not allow any object to be extracted, thus also observing the CSC (see Section 2.5.7). Note that (59) is only grammatical in a bi-clausal structure, in which O1 is topicalised in the first conjunct, and is not interpreted as the topic of the whole sentence. Compare (59) and (60) with the object extraction pattern of the CSVC (Section 9.3.4). Furthermore, this bi-clausal structure does not correlate with the meaning whether the flowers were also taken to the dorm by the subject, as opposed to the CSVC.

MC

(59) *Hua, ta feikuaide mai, (ranhou) manmande hui sushe le.*

flower 3SG quickly buy later slowly return dorm DM

*a. Intended: ‘The flowers, s/he quickly bought (them), and (took them) slowly back to the dorm.’ (SVC)

b. ‘The flowers, s/he quickly bought (them). And s/he went back to the dorm slowly.’ (bi-clausal)

(60) **Sushe, ta feikuaide mai hua, (ranhou) manmande hui le.*

dorm 3SG quickly buy flower later slowly return DM

Intended: ‘The dorm, s/he quickly bought some flowers, and later slowly returned (to it).’

In JSM, V2, a directional verb, cannot be directly modified by a manner adverb that occurs to its right, unlike in MC. For example, the expression **tokhi a ia kin* ‘lit. return SUBORD very quickly’ is not acceptable in JSM, in which the subordinate clause *ia kin* ‘very quickly’ semantically modifies the directional verb *tokhi* ‘return.go’. Instead, in order to convey the attempted meaning that the motion of returning is very slow, a verb that specifies the manner of motion (e.g., *kiann* ‘walk’ in (61)) must be used in addition to the original V2 that only indicates the directed motion. To specify different paces that

are observed in the process of buying food and the motion of walking back, the speaker can only use a multi-clausal construction, such as (61).

JSM

(61) *I bue tshai bue a ia ban, m kuh I tokhi*
 3SG buy food buy SUBORD very slowly but 3SG return

*(*kiann*) *a ia kin.*

walk SUBORD very quickly

‘S/he slowly bought some foods, but s/he walked back very quickly.’

00:55:21.240 - 00:55:26.850 LTS REC005-02 20-05-15

In contrast, the CSV in JSM only accepts modification by a single manner adverb. As shown in (62), to cancel the scope of modification by a pre-V1 adverbial, such as *kuannkin* ‘quickly’, is unacceptable. A continuing clause that adopts a distinct manner adverb to modify the motion is rejected.

JSM

(62) *I kuannkin bue tsik a tshai tolai tshulai,*
 3SG quickly buy some food return house

(* *m kuh I kiann tolai tshulai kiann ia ban.*)

but 3SG walk return house walk very slowly

Intended: ‘S/he quickly bought some foods and took them back home, but s/he walked back very slowly.’

00:56:53.185 - 00:56:55.625 LTS REC005-02 20-05-15

The above discussion shows that the CSV only allows modification by one manner adverbial. In contrast, bi-clausal structures allow each clause to be modified by a distinct manner adverbial. The status of the bi-clausal structure can be revealed by its

observation of the CSC, a prosodic break between the clauses and absence of entailment of the caused-motion of O1 (the undergoer argument).

9.2.6 Tone sandhi

The diagnostic of tone sandhi may not be applicable with this type of SVC (see details of such a diagnostic in Section 2.5.6). Nevertheless, it is highly likely for native speakers to have a prosodic break between two clauses rather than between two cores in the CSVC.

9.2.7 Interim Summary

The CSVC can be differentiated from bi-clausal structures with regard to the inter-clausal diagnostics. Again, in this semantic sub-type of core SVC attested in both varieties, one can observe the phenomenon whereby the same string of verbs can occur in different structures: an SVC or a bi-clausal structure.

9.3 Intra-clausal diagnostics

In this section, the behaviours of the CSVC with regard to the intra-clausal diagnostics are discussed. I will show that the CSVC is a type of core SVC that behaves differently from the nuclear SVCs and it forms on the basis of subject argument fusion.

9.3.1 Passivisation of O1

Only O1 is passivisable as opposed to O2 in the CSVC. As I have discussed in Section 9.2.2, O1 is recognised as an undergoer in the CSVC, which denotes affectedness, a semantic characteristic of the subject in a passive construction. To illustrate, see (63) and (64).

MC

(63) *Hua, bei ta mai qu sushe le.*
flower PASS 3SG buy go dorm PFV

'The flowers were bought and taken to the dorm by him.'

JSM

(64) *Hue khih i bue lai soksia lo*
Flower PASS 3SG buy come dorm PFV

'The flowers were bought and taken to the dorm by him/her'

01:44:52.740 - 01:44:54.210 MT 106-143 140615-01 16-5-14

9.3.2 Insertion of intervening material

As discussed in Section 2.7.2.2, the occurrence of an object between serial verbs suggests the status of core SVC. In the CSVC, V1 is transitive and is immediately followed by an object. Therefore, the non-contiguity between the component verbs in the CSVC meets the criterion of core SVCs.

9.3.3 Coordination within the SVC

In this section, I will show that either core in the CSVC can be coordinated within the SVC. The ability of allowing either core to coordinate within the SVC suggests that the CSVC is a core SVC.

Data in this section also show another example of the phenomenon whereby the same string of verbs may occur in different structures. While V1O1 is coordinated with another VO that denotes an action, the resulting expression is ambiguous in both meaning and structure. This resulting expression may still be a CSVC, possibly represented in (65), or a clausal coordinate, possibly represented in (66). In the clausal coordinate, the first clause is the coordinated VO, and the second clause is the original

CSVC. The ambiguity can however be resolved by applying the inter-clausal diagnostic of negation.

(65) ...[VOVOVO]_{SVC}...

(66) ...[VO]_{CL} [VOVO]_{SVC}...

V1O1 can be coordinated with another VO that denotes a different action. Examples are provided in (67) and (68).

MC

(67) *Wo mai hua na baozhi hui sushe.*

I buy flower take newspaper return dorm

‘I buy/bought flowers and take/took newspapers back to the dorm.’

JSM

(68) *Abu ta tsioh (koh) bue tshai tolai tshulai.*

mother carry stone and buy food return house

‘Mother carried stones, bought foods, and took them back home.’

00:34:55.708 - 00:34:59.618 LTS REC014 20-05-15

The above two expressions are ambiguous in both meaning and structure. They can be analysed as either a CSVC in which the first core coordinated with another VO that also denotes a different action, or a bi-clausal structure in which the V1O1 consists of an independent clause and the second and third VOs form a CSVC. When the three VOs form a clausal coordinate, each clause can be independently negated by applying the inter-clausal diagnostic of negation. Moreover, a prosodic break is highly likely to occur between the two clauses. Since the clausal coordination is not relevant in my discussion of coordination of the core within the CSVC, I do not illustrate it here.

When the three VOs form a CSVC indicating that both the items denoted by O1 and O2

move to the location denoted by O3, only a pre-V1 negative is accepted in the SVC, as shown in (69) and (70).

MC

(69) *Wo mei mai hua na baozhi hui sushe.*

I NEG buy flower take newspaper return dorm

‘I didn’t/ don’t buy flower and take newspaper back to the dorm.’ (CSVC)

JSM

(70) *Abu bo ta tsioh bue tshai tolai tshulai.*

mother NEG carry stone buy food return house

‘S/he didn’t carry stone, buy food, or take them back home.’ (CSVC)

00:02:33.341 - 00:02:36.991 LTS REC017 20-05-15

As I have shown in Section 9.2.1, pre-V1 negation in CSVC has flexible interpretations regarding the scope of negation. In (71), it shows that in (69) what falls into the scope of negation is the locative NP only. Likewise, in JSM, with a pre-V1 negative, the scope of negation in (70) may only include the directed motion *tolai tshulai* ‘lit. return home’, as shown in (72). Two continuing clauses are used to specify this narrow scope of negation in the SVC. The pre-V1 negation may also include the whole SVC into the scope of negation, expressions of which are not illustrated here.

MC

(71) (69), *hua wo mai qu jiali, baozhi na qu bangongshi le.*

flower I take go home newspaper take go office DM

‘(69), the flowers, I bought and took them home. The newspaper I took to the office.’ (CSVC)

JSM

(72) (70), *tsioh i ta khi Poli in tei khi tshu,*

stone 3SG carry go PN her place build house

tshai i khong leh tshai kuan leh

food 3SG put at restaurant

‘(70), the stones, s/he carried them and took them to Poli’s home to build a house; the food, s/he (bought it and) put it in the restaurant.’ (CSVC)

00:03:42.695 - 00:03:51.395 LTS REC017 20-05-15

It is also acceptable to coordinate the second core of the CSVC with another VO that denotes a directional motion. In (73), the two coordinated cores are connected by the conjunction word *huo* ‘or’ (MC). The constructional meaning still holds on V3O3, as the expression denotes that the flowers will be taken to Lisi’s dorm if they are not taken to my home.

MC

(73) *Ta mai hua lai wo jiali huo qu Lisi de sushe.*

3SG buy flower come I home or go PN POSS dorm

‘S/he bought flowers and took them to my home or to Lisi’s dorm.’

The ease of interpreting V3O3 as the third core in the CSVC is largely due to the semantic coherence that exists in the expression. As argued in Zhang (2009b) (see her Section 7.2.2) based on the findings in Kehler (2002), coordination survives on the basis of semantic relatedness and resemblance. In expression (73), the first two VOs have established a semantic connection, or the “caused-motion” meaning in the CSVC. On the basis of establishment of such a situation, V3O3 must maintain the discourse coherence and expresses something that is related to the established situation by the first two VOs, consequently the ease of interpretation of V3O3 as the last core in the CSVC. While acknowledging the existence of the factor of discourse relatedness and coherence, I am also aware that it is possible, although less likely, for a native speaker to have a bi-clausal interpretation of expression (73). However, the bi-clausal structure can be diagnosed by applying the inter-clausal diagnostic of (independent) negation to the component verbs as well, and I do not elaborate it in the current discussion of an

intra-clausal diagnostic.

In JSM, one can say the expression in (74), where *khi Poli in tei* ‘go to Poli’s place’ is coordinated with the second core of the original CSVC with the conjunction word *a si* ‘or’. Note that it is not possible for this selective conjunction word to be replaced by *kap* ‘and’. Otherwise, a NP coordinate is used instead, see (75).

JSM

(74) *Abu beh bue tshai lai gun tshulai*
mother will buy food come our home/house

a si khi Poli in tei ni?

or go Poli her place DM

‘Mother will buy foods. Will she take them to our home or Poli’s home?’

00:00:00.190 - 00:00:07.150 LTS 071 10-09-15

(75) *Abu kut tsik a hantsi tolai gun tshulai*
mother dig some sweet.potato return our house

kap Poli in tei.

and PN her place

‘Mother dug some sweet potatoes and took them to our home and Poli’s home’

00:10:42.577 - 00:10:48.817 LTS REC007 20-05-15

The caused-motion meaning does exist even when the second core is coordinated. That is, the resulting expression still expresses that the referent of O1 will be caused to move to the newly added location denoted by O3, thus the caused-motion meaning. As illustrated in (76), the caused-motion meaning cannot be cancelled from the coordinated V3O3, suggesting its existence within the SVC.

JSM

(76) (74) (*, *m kuh I bue thue tshai khi Poli in tei*).

but she will.not take food go PN his/her house

‘(74), but she will not take food to Poli’s home (if she does not come to our house with the food she bought).’

Presumably, the same phenomenon can be observed with these JSM data, whereby it is much easier for native speakers to have a CSVC reading with the SVC-internal coordination of V2O2 than to have a bi-clausal reading. While the bi-clausal reading is not entirely impossible, it requires a particular context to “cut” the semantic relation between the first VO and the third VO in the bi-clausal structure. Given the limits on the complexity of eliciting data, I was not able to obtain more data to show the existence of the similar phenomenon in JSM expressions. I shall leave it for further research.

9.3.4 Obligatory topicalisation of the undergoer argument

It has been shown in expressions (1)-(6) that each component verb in the CSVC is followed by its NP argument. As an alternative, optional topicalisation of either object may be used according to the pragmatic needs in the discourse. This is illustrated in expressions (77)-(80).

MC

(77) *Hua, ta mai qu sushe le.*

flower 3SG buy go dorm PFV

‘The flowers, s/he has bought them and took them to the dorm.’

(78) *Sushe, ta mai hua qu; jiali, ta mai shuiguo lai.*

dorm, 3SG buy flower go home 3SG buy fruit come

‘The dorm, s/he will buy some flowers and take them there; the home, s/he will buy some fruits and take them back here.’ (The speaker is at home.)

JSM

(79) *Hue i bue lai soksia le*

flower 3SG buy come dorm PFV

‘The flowers, s/he bought them and took them back to the dorm.’

01:44:46.419 - 01:44:47.999 MT 106-143 140615-01 16-5-14

(80) *Hithaileh, gua bue tsui khi;*

stage I buy water go

kongbathiann, gua bue thotaugulin khi.

goddess.temple I buy peasant.milk go

‘To the stage (or outdoor theatre), I will buy some water and take it there; to the goddess temple, I will buy some peasant milk and take it there.’

00:29:26.966 - 00:29:33.336 LTS REC003 20-05-15

It should be noted that, despite my interpretation of “caused-motion” in the CSV, O1 is interpreted as a co-participant in the directed motion only at the semantic level. To be more precise, O1 itself cannot function as the subject of V2 on its own. For example, it is unacceptable to say (81), as the verb *hui* ‘return’ or *qu* ‘go’ not only denotes a direction or location but also expresses the notion of motion, which requires an argument with high agency or animacy, such as humans, or animals, to initiate the directed motion. A similar argument that O1 cannot be taken as the subject of the directional verb V2 can also be found in a discussion of corresponding serial verbs in White Hmong by Jarkey (2015, 144).

MC

(81) **Hua hui/qu sushe le.*

flower return/go dorm PFV

Intended: ‘The flowers returned/went to the dorm.’

Since I do not assume any change of semantic specification of a verb in and outside the SVC in the analysis, O1 is the object argument of V1 and is not considered as an argument - the subject argument - in the second core of the CSV, given its behaviour in (81). Consequently, there is no functional difference of O1 in the syntactic argument structures of the two cores in the CSV such that it must be topicalised as the undergoer argument does in some expressions of the Resultative SVC (see Ch. 6) and the Excessive SVC (see Ch. 7). For more details, see also Section 2.7.2.4 and Section 7.3.4.

Moreover, I also address the issue, in Section 9.2.3 in particular, as well as other sections, whereby in a bi-clausal structure, which has V2 as its single predicate in the second clause, it is not possible to interpret O1 as the subject in the second clause, nor to interpret O1 as a co-participant engaged in the motion event either; see, for example, (51). As I have shown that V2 on its own does not take O1 as its subject in a simple clause. Therefore, the “caused-motion” interpretation is only enforced in the semantics of the CSV.

From the above discussion, it can be seen that this “caused-motion” interpretation does not correlate with a particular syntactic structure so that O1 in the CSV should be topicalised as the undergoer argument does in the Resultative SVC and the Excessive SVC. See Section 7.3.4 in particular, for details of the obligatory topicalisation of the undergoer argument in the Excessive SVC in a comparison to the absence of it in the other types of core SVC.

9.3.5 Interim Summary

In this section, I have shown that the CSV allows its core to be coordinated. I also show that such coordination may result in ambiguity in meaning and structure, thus another example of the phenomenon whereby the same string of verbs may occur in different structures. Nevertheless, this ambiguity can be resolved by the diagnostic of

negation. Finally, I provide an account for the phenomenon that O1 does not undergo obligatory topicalisation based on the observation of the semantic requirement on the subject argument of V2 on its own and O1's syntactic function with respect to the two cores in the CSVC.

9.4 Summary

In this chapter, I discuss a semantic sub-type of core SVC: the Caused-Motion SVC (or the CSVC). I have shown that the CSVC shows monoclausal characteristics with regard to the inter-clausal diagnostics in general. It exhibits characteristics of core SVC with regard to the intra-clausal diagnostics.

With regard to the inter-clausal diagnostic of passivising the object of V2, although the CSVC in principle does not allow its O2 to be passivised, it does not present a counterexample either to the diagnostic or its SVC structure. As I have shown that, it is due to the semantic and syntactic properties of the locative NP in the construction that it cannot be passivised. More importantly, with regard to the test of argumenthood, the locative NP can hardly be seen as the argument of V2 in the CSVC. Therefore, the inability to passivise of O2 in the CSVC should be distinguished from the failure to passivise O2 in a bi-clausal structure in nature.

With regard to the intra-clausal diagnostic of coordination within the SVC, I have shown that, the CSVC allows either core to be coordinated. The resulting expression with a coordinated V1O1 is ambiguous in both meaning and structure, which however can be distinguished with the inter-clausal diagnostic of independent negation. Moreover, with regard to the diagnostic of obligatory topicalisation of object(s), the CSVC only allows its O1 to undergo optional obligatory topicalisation. I provide an account for the optional topicalisation of the undergoer argument (O1) in the CSVC. I have argued that such an interpretation of O1 as an actor in the "caused-motion" sub-event is only obtained within the CSVC and it does not exist outside the CSVC.

Despite the interpretation that O1 is a participant in the motion sub-event denoted by V2, this argument is only introduced by V1 and it does not function as the subject of V2 in syntactic argument structure of the second core. Thus, it is different from the Resultative SVC and the Excessive SVC in terms of the argument structures. In addition, unlike Paamese, MC and JSM do not employ morphological means to mark all the “participants” in the motion sub-event on verbs or on arguments. In conclusion, the notion of “caused-motion” is only inferred within the CSVC, and the inferred “actor” role of O1 in the motion sub-event does not have any syntactic correlate (i.e., the subject of V2) in the SVC such that O1 must be topicalised, as the undergoer argument does in the Resultative SVC (Section 6.3.4) and the Excessive SVC (Section 7.3.4).

Chapter Ten: Purposive Serial Verb Construction

10.1 Introduction

This chapter introduces the Purposive SVC (PSVC hereafter) in MC and JSM. Differing from the Instrumental SVC (ISVC hereafter) and the Caused-Motion SVC (CSVC hereafter), the PSVC is a symmetric type of SVC, as each component verb comes from an open class. The PSVC has two cores denoting actions that happen in a linear temporal order. Temporally prior to the second action, the first action is conducted for the purpose of fulfilling the second action.

There are two commonly observed sub-types of the PSVC in terms of the realisation of object arguments. In the first sub-type, in addition to the subject, the two verbs share the same object¹⁰⁸, which however is only realised after V1 in the construction. The surface form can be characterised as SVOV. For simplicity, I call the first sub-type *T1 (PSVC)*. Expressions of the type T1 PSVC that I have investigated include:

MC

- (1) *mai yifu chuan* ‘buy clothes wear’
- (2) *bo jidan chi* ‘peel egg eat’
- (3) *zhai qingjiao chao* ‘pluck green capsicum stir-fry’
- (4) *zhong yumi chi* ‘plant corn eat’

JSM

- (5) *bue sann tshin* ‘buy clothes wear’
- (6) *thim kuntsui lim* ‘pour boiled water drink’
- (7) *pak kuelng tsiah* ‘peel egg eat’
- (8) *ban tshintsio tsha* ‘pluck green capsicum stir-fry’

¹⁰⁸ However, see a justification of the terminology “object sharing” in section 10.2.2.

(9) *tsing hantsi tsiah* ‘plant sweet potatoes eat’

The second sub-type has two transitive verbs in a string. Each verb is followed by a distinct object. The surface form can be characterised as SVOVO. For simplicity, I call the second sub-type *T2 (PSVC)*. Expressions of the *T2 PSVC* that I have investigated include:

MC

(10) *pa shu zhai longyan* ‘climb tree pluck longan’

(11) *tiao shui jiao cai* ‘load water water vegetable’

(12) *dai chongzi wei ji* ‘catch insect feed chicken’

JSM

(13) *beh tshiu liak thang* ‘climb tree catch insect’

(14) *ta tsui ak tshai* ‘load water water vegetable’

(15) *liak thang tshi kue* ‘catch insect feed chicken’

(16) *thiah tsua sia phui* ‘tear paper write letter’

Instead of showing the behaviours of all the above expressions with regard to the diagnostics, I adopt the expressions (17)-(20) to exemplify the behaviours of the two major sub-types of the *PSVC* in this chapter. The other expressions of each sub-type of the *PSVC* behave in the same way and I do not illustrate them here.

MC

T1

(17) *Wo zhongwu zhu miantiao chi.*

I at.noon cook noodles eat

‘I cook some noodles to eat at noon.’

T2

(18) *Ta wa dong zhua tuzi.*

3SG dig hole catch rabbit

‘S/he dig/dug a hole to catch rabbit(s).’

JSM

T1

(19) *Gua thin kuntsui lim.*

I pour hot.water drink

‘I pour(ed) some hot water to drink’

00:41:26.067 - 00:41:27.547 MT 78-88 140613-01 14-5-14

T2

(20) *Kan a iah tong liak tokau.*

children dig hole catch cricket

‘The children dig/dug a hole to catch crickets.’

00:42:12.620 - 00:42:14.990 LTS VR0003 27-05-15

The T1 PSVC is exemplified in (17) and (19). The transitive verbs *zhu* ‘cook’ and *chi* ‘eat’ in MC share the object *miantiao* ‘noodles’ in (17). The transitive verbs *thin* ‘pour’ and *lim* ‘drink’ in the JSM example share the object *kuntsui* ‘hot water’ in (19). The T2 PSVC is exemplified in (18) and (20). The transitive V1, *wa* ‘dig’ in MC, or *iah* ‘dig’ in JSM, is followed by the object *dong* ‘hole’ (MC) or *tong* ‘hole’ (JSM). The transitive V2, *zhua* ‘catch’ in MC or *liak* ‘catch’ in JSM, is followed by the object *tuzi* ‘rabbit’ (MC), or *tokau* ‘cricket’ (JSM).

The semantic characteristic of denoting a purpose in the PSVC resembles the purposive subordinate expressions (PSE hereafter). In the upcoming sections, I will show that the two sub-types of the PSVC differ from the PSEs (and of course other bi-clausal structures) with regard to the inter-clausal diagnostics. Based on my data, I will argue that the structure of core serialisation determines its pattern of passivising object(s). In particular, the impossibility of passivising the so-called “shared” object argument in T1 should not be considered as an exception to the inter-clausal diagnostic of passivising the object of V2. With regard to the intra-clausal diagnostics, the PSVC exhibits

characteristics of a core SVC.

10.2 Inter-clausal diagnostics

10.2.1 Negation

Bi-clausal structures allow independent negation of each component verb (see Section 2.5.2). In this section, I illustrate this independent negation with independent pre-V2 negation. The same string of verbs that are involved in the PSVC can also occur in a clausal coordinate structure, V2 of which is independently negated¹⁰⁹ from V1. The scope of the pre-V2 negation only includes the second conjunct, as shown in (21)-(24). For the interpretation of (22), some more context information is needed to relate the two actions to each other. For example, the subject usually digs a hole to catch a rabbit. However, this time, quite differently from before, s/he dug a hole, but did not catch the rabbit with it. A similar scenario may be established to interpret (24).

MC

T1

(21) *Ta zhu miantiao mei chi (, liu zhe dang wanfan).*

3SG cook noodles NEG eat keep DUR as dinner

‘S/he cooked some noodles but s/he didn’t eat them, keeping them for dinner.’

T2

(22) *Ta wa dong, (danshi) mei zhua tuzi.*

3SG dig hole but NEG catch rabbit

‘S/he dug a hole/holes, but s/he didn’t catch rabbit (with it/them).’

JSM

T1

(23) *I kinna thin kuntsui bo lim.*

3SG today pour boiled.water NEG drink

¹⁰⁹ In this case, there is no purpose interpretation between the two conjuncts. See a discussion on negation in the purpose clause in Section 2.5.2.

‘Today, s/he poured some boiled water (into a mug), but s/he didn’t drink it.’

00:49:44.756 - 00:49:46.096 MT 78-88 140613-01 14-5-14

T2

(24) *Kan a iah tong bo liak tokau.*

child dig hole NEG catch cricket

‘The children dug a hole/holes, but they didn’t catch crickets (with it/them).’

00:57:44.503 – 00:57:46.733 LTS VR0003 27-05-15

In the case where the two verbs share the same semantic arguments, such as (21) and (23), it might not be immediately clear whether they occur in different clauses when the independent pre-V2 negation happens. Nevertheless, the bi-clausal structure in (21) and (23) can be observed, in that the two clauses do not coindex identical arguments. Only co-referentiality of the same referent is involved. Despite the same referent of the subject argument, it is still possible to add a reflexive pronoun *ziji* ‘self’ as an anaphor in the second clause, which refers to the subject in the first clause as shown in (25), as opposed to SVCs. For a related discussion on overt expression of the subject of the second clause, see Section 2.4. Expressions in (21)-(24) can only be understood as bi-clausal, i.e., as denoting two unrelated actions. Moreover, it is highly likely to observe a prosodic break between O1 and the reflexive, corresponding to the location of the clausal boundary in the expression (see Section 2.5.6).

MC

(25) *Ta zhu miantiao ziji mei chi.*

3SG cook noodle self NEG eat

‘S/he cooked noodles, but s/he herself didn’t eat.’

JSM

(constructed)

(26) *I kinna thin kuntsui kai bo lim.*

3SG today pour boiled.water self NEG drink

‘Today, s/he poured some boiled water (into a mug), but s/he herself didn’t drink it.’

With regard to the pre-V2 negation, we can see that expressions (22) and (24), where V2 takes a distinct object from V1’s object, also have a bi-clausal structure as well. The result, as illustrated in (27)-(30), show that neither object may be extracted from its conjunct, thus violating the CSC. Therefore they should be considered as a coordinate sentence.

MC

- (27) **Dong, ta wa¹¹⁰, (danshi) mei zhua tuzi.*
hole 3SG dig but NEG catch rabbit

Intended: ‘The hole, s/he digs/dug, but s/he didn’t catch rabbit (with it).’

- (28) **Tuzi, ta wa dong, (danshi) mei zhua.*
rabbit 3SG dig hole but NEG catch

Intended: ‘*The rabbit, s/he digs/dug hole, but s/he didn’t catch (it).’

JSM

- (29) **Tong, kan a iah bo liak tokau.*
hole child dig NEG catch cricket

Intended: ‘The hole, the children dig/dug, but they didn’t catch crickets (with it).’

- (30) **Tokau, kan a iah tong bo liak.*
cricket child dig hole NEG catch

Intended: ‘*The crickets, the children dig/dug hole, but they didn’t catch (them).’

Contrastively, with a pre-V1 negation, a PSVC may have different interpretations depending on which constituent is negated. It is noteworthy that it is easier to negate the precondition denoted by the first core with a pre-V1 negation than the purpose denoted

¹¹⁰ For the first clause to be grammatical, there must be a perfective marker *le* that follows the verb *wa* ‘dig’.

by the second core. In the T1 PSVC with a pre-V1 negation, to negate the first core and the whole construction is equally acceptable, as shown in (31), (32), (34) and (35). However, to negate the second core is not easy. It requires a bi-clausal structure. As can be seen in (33) and (36), V2 is within a focus construction, which is negated by *bu shi* ‘is not’ in MC or *m si* ‘is not’ in JSM. A continuing clause is added to each negative clause to specify the negated constituent in the interpretation.

MC

- (31) *Wo mei mai shuiguo chi, wo mai shupian chi de.*
 I NEG buy fruit eat I buy chips eat FOC
 ‘I didn’t buy any fruits to eat. I bought some chips to eat.’

- (32) *Wo mei mai shuiguo chi, wo wang le.*
 I NEG buy fruit eat I forget PFV
 ‘I didn’t buy any fruits to eat. I forgot.’

- (33) *Wo mai shuiguo bu shi (yao) chi, shi yao song ren.*
 I buy fruit NEG COP will eat COP will send person
 ‘I bought some fruits. But they are not for me, they are to be sent for someone else.’

JSM

- (34) *Gua bo bue tsesann tshin, gua bue tongkho tshin.*
 I NEG buy sweater wear I buy shorts wear
 ‘I didn’t buy sweaters to wear. I bought shorts to wear.’

00:19:09.978 - 00:19:15.398 LTS VR0002 26-05-15

- (35) *Tsit khuinn gua bo bue sann tshin, tsit khuinn bo tsinn.*
 this period I NEG buy clothes wear this period NEG money
 ‘I didn’t buy any clothes to wear recently. I don’t have any money recently.’

00:20:27.855 - 00:20:31.925 LTS VR0002 26-05-15

(36) *Gua bue sann m si beh tshin,*
I buy clothes NEG COP will wear

gua bue sann si khong leh hokhuann
I buy clothes COP put DUR good-looking

‘I bought clothes. But I don’t wear them. I just leave them there and appreciate their beauty.’

00:21:14.685 - 00:21:21.495 LTS VR0002 26-05-15

In the T2 PSVC, either the whole construction or a core can be negated with a pre-V1 negation, as illustrated in (37)-(42). A continuing clause is also added to each negative clause to specify the negated constituent in the interpretation.

MC

(37) *Ta mei wa dong zhua tuzi, ta jintian mei kong.*
3SG NEG dig hole catch rabbit 3SG today NEG free.time
‘S/he didn’t dig a hole to catch rabbit today. S/he is busy today.’

(38) *Ta mei wa dong zhua tuzi, ta yong tie jiazi zhua tuzi.*
3SG NEG dig hole catch rabbit 3SG use iron traps catch rabbit
‘S/he didn’t dig a hole to catch rabbit today. S/he used iron traps to catch rabbit.’

(39) *Ta mei wa dong zhua tuzi, ta wa dong zhong shu.*
3SG NEG dig hole catch rabbit 3SG dig hole plant tree
‘S/he didn’t dig a hole to catch rabbit today. S/he dug holes to plant trees.’

JSM

(40) *Kan a bo iah khang liak tokau, kan a kinna ke ti tshulai.*

children NEG dig hole catch cricket children today all at home

‘The children didn’t dig a hole to catch crickets. They were all at home today.’

00:56:11.640 – 00:56:15.090 LTS VR0003 27-05-15

(41) *Kan a bo iah khang liak tokau, kan a*

children NEG dig hole catch cricket children

kuan tsui liak tokau.

pour watercatchcricket

‘The children didn’t dig a hole to catch cricket. They poured water (into the hole dug by crickets themselves) to catch the crickets.’

00:57:28.138 – 00:57:31.198 LTS VR0003 27-05-15

(42) *Kan a bo iah khang liak tokau, kan a*

children NEG dig hole catch cricket children

iah khang bu hantsi.

dig hole grill sweet.potato

‘The children didn’t dig a hole to catch crickets. They dug a hole to grill the sweet potatoes.’

00:56:49.770 - 00:56:53.490 LTS VR0003 27-05-15

10.2.2 Passivisation of the object of V2

The semantics of the object of V2 in the PSEs prevents it from occurring as the subject in the passive. Cross-linguistically, there is a strong tendency for a purpose clause to follow the main clause (Greenberg 1963, 84, Schmidtke-Bode 2009, Yin 2011). Since the purpose subordinate clause is used to express an event that is unrealised at the time

of the precondition event, the object of V2, which is part of the purpose clause, must refer to a participant that occurs in such a subsequent event. With the explicit purposive marker “*go*”¹¹¹ (*qu* ‘go’ in MC and *khi* ‘go’ in JSM), the realisation of the event denoted in the purpose clause is hypothetical. In this sense, a purpose differs from an actual result with regard to realisation. While the prototypical passive construction is semantically characterised by the affectedness of its surface subject (Shibatani 1985, 841, 1988, Abraham and Leisiö 2006, Keenan and Dryer 2007, 341-342), it is less likely for the object in the purpose subordinate clause (approximately corresponding to the object of V2), to undergo passivisation, given the semantic incompatibility between the purposive expressions and the passive expressions in terms of the actual (un)affectedness of an involved participant. MC and JSM do not allow O2 in a PSE, such as (43) and (44), to be passivised, as illustrated in (45)-(46). The following four expressions of the PSE are repeated from Section 2.5.2 for the convenience of comparing the PSE and the PSVC.

MC

- (43) *Wo mai le mianfen lai bao jiaozi.*
 I buy PFV flour come wrap dumpling
 ‘I bought some flour to make dumplings.’

JSM

- (44) *Gua khui tshia khi bue tshai*
 I drive car go buy veggies
 ‘I drove a car to buy some veggies.’

00:01:16.880 - 00:01:18.340 MT 91-97 140614_02 15-5-14

MC

- (45) **Jiaozi bei wo mai mianfen lai bao le.*
 dumpling PASS I buy flour come wrap PFV

¹¹¹ Directional verbs are often grammaticalised to mark a purpose clause (Bybee, Pagliuca et al. 1991, Bybee, Perkins et al. 1994) via metaphor and/or metonymy (Lakoff and Johnson 1980, 1999, Schmidtke-Bode 2009, 97-98).

Intended: ‘The dumplings were made by me buying some flour.’

JSM

- (46) **Tshai khih gua khui tshia khi bue lo.*
veggies PASS I drive car go buy DM
‘The veggies were bought by me driving a car.’

Given the object sharing pattern in T1 PSVC, the input of the current diagnostic should be the only object argument that is realised at the surface form. The resulting expressions of the passivised T1 PSVC in (47)-(50) show that despite of its semantics of a typical patient argument, the shared object is generally not passivisable in the bare T1 PSVC in both varieties.

MC

- (47) *Miantiao bei wo zhu chi le.*¹¹²
noodle PASS I cook eat PFV
‘The noodles were cooked and eaten by me.’

- (48) **Kaishui bei ta dao he le.*
boiled.water PASS 3SG pour drink PFV
Intended: ‘The boiled water was poured and drunk by him/her.’

- (49) ??*Jidan bei ta bo chi le.*
egg PASS 3SG peel eat PFV
‘The egg was peeled and eaten by him/her.’

- (50) **Cai yijing bei ta zhai chao le.*
vegetable already PASS 3SG pluck stir-fry PFV

¹¹² It is grammatical for some MC speakers to passivise the “shared object” in this particular verb combination that involves V1 denoting a cooking method and V2 that is usually an “eat” verb. This verb combination seems to be an exception in T1 PSVC with respect to the diagnostics such as passivisation and topicalisation. However, I have not been able to provide an account for it.

Intended: 'The vegetables were already plucked and stir-fried by him/her.'

The above passives show that in MC, the shared object is generally not passivisable, except in (47). Resistance to passivisation of the realised object in T1 PSVC remains when the animacy of its referent is enhanced. In (51), the argument *liulanghai* 'homeless child(ren)' is an animate human object, in contrast to the inanimate objects in the above expressions. Yet it cannot be passivised, as illustrated in (52).

MC

(51) *Ta jian liulanghai yang.*

3SG pick.up homeless.child(ren) raise

'S/he picked up homeless children to raise.'

(52) **Naxie liulanghai bei ta jian yang (le).*

those homeless.children PASS 3SG pick.up raise PFV

Intended: 'Those homeless children were picked up by him/her to raise.'

In JSM, passivisation of the shared object is not possible without the phasal marker *khi* 'go' that follows immediately after V2. With the aid of this phasal marker, JSM seems to have a stronger ability to passivise the shared object in the T1 PSVC than MC, as shown in (53)-(56).

JSM

(53) *Tshintsio khih abu tsha tsiah *(khi) lo.*

green.capsicum PASS mother stir-fry eat go DM

'The green capsicum was stir-fried and eaten by mother.'

00:00:25.550 - 00:00:28.480 LTS VR0001-1 26-05-15

(54) *Kuntsui khih gua thin lim *(khi) lo.*

boiled.water PASS I pour drink go DM

‘The boiled water was poured and drunk by me.’

00:42:55.355 - 00:42:57.405 MT 78-88 140613-01 14-5-14

(55) *Kuelng khih Sionsiong pak tsiah *(khi) lo.*
egg PASS PN peel eat go DM

‘The egg was peeled and eaten by Sionsiong.’

00:00:40.870 - 00:00:43.590 LTS VR0001 26-05-15

(56) *(Hit lng pho tshai) tsa am khih Poliban tsha *(khi) lo.*
that two CLF vegetables last night PASS PN pluck stir-fry go DM

‘Those vegetables were plucked and stir-fried by Poli last night.’

00:01:20.565 - 00:01:24.685 LTS VR0001-1 26-05-15

Despite the grammaticality of passivising the shared object in JSM on the occurrence of the phasal marker *khi* ‘go’, the input structure, i.e., T1 PSVC, does not seem to be maintained in the JSM passive. As can be seen in (57)-(60), the passivisable object cannot be placed between the two transitive verbs any more in the active form of the verb cluster (V...V *khi*), probably suggesting the existence of a more complicated multi-core SVC in the passives¹¹³. This is in contrast with the VOV form in the T1 PSVC, exemplified in (5) to (9).

JSM

(57) **tsha tshintsio tsiah (khi) lo.*
stir-fry green.capsicum eat go DM

Intended: ‘The green capsicums were stir-fried and eaten up.’

¹¹³ Since the realised undergoer argument must not occur after V1,(or any other position after any component verb), it seems to be topicalised obligatorily in the expression. According to my intra-clausal diagnostics, obligatory topicalisation of the undergoer argument indicates structure of a core SVC (Section 2.7.2.4). It follows that expressions (53)-(56) may contain a core SVC. As more than three verbs (V3 is a phasal verb) are involved in these expressions of a core SVC, the status of the undergoer argument should be related to multiple cores in the core SVC, i.e., the argument structure of each verb in the core SVC. It is worth further study and I do not explore it here.

(58) **thin kuntsui lim (khi lo)*.
 pour boiled.water drink go DM
 Intended: ‘The boiled water was poured and drunk up.’

(59) **pak kuelng tsiah (khi lo)*.
 peel egg eat go DM
 Intended: ‘The eggs were peeled and eaten up.’

(60) **ban hit lng pho tshai tsha (khi lo)*.
 pluck that two CLF veggie stir-fry go DM
 Intended: ‘Those veggies were plucked and stir-fried.’

Consequently, the above results suggest that it is ungrammatical to passivise the shared object in the T1 PSVC in both varieties. Given the status of the shared object as a typical patient argument and the only undergoer argument realised in the T1 PSVC, the ungrammaticality of passives formed from such SVCs is not expected. In the following, I will argue, the impossibility of passivising the shared object in the T1 PSVC should be accounted for in its structure of core serialisation that forms via argument fusion. Although V1 in the PSVC may have its independent syntactic argument, the referent of the independent argument of V1 can be still made accessible to the other verb in the PSVC or the entire SVC via argument fusion (or argument coindexation).

As I have argued in Section 2.6.6, core SVCs form via argument fusion. Unlike nuclear SVCs, where the involved component verbs have merged into a single unit, each of the component verbs in core SVCs may demonstrate syntactic independence. This syntactic independence is typically represented by the fact that the O1 in a core SVC that takes two objects is usually opaque to the syntactic operation of passivisation; see the related behaviour of the ISVC in Section 8.3.1 and the T2 PSVC in Section 10.3.1; though the CSVC in Ch. 9 seems an exception due to its particular semantic characteristics, O1 is only contributed by V1. The impossibility of passivising O1 in the ISVC and the T2

PSVC suggests that their V1s keep their object argument in their own argument domain rather than making it accessible to the overall SVC. That is, a core SVC forms on the basis of argument fusion. In such a core SVC, V1 may have independent, though coindexed, argument(s), the referent(s) of which are made accessible to another verb or the entire SVC via argument coindexation or argument fusion (see Section 2.6.6). In the following, I will show that the T1 PSVC involves a kind of referent sharing rather than object sharing. I will argue that such a referent sharing in the T1 PSVC exists on the basis of a temporal dependence of the two involved actions denoted by the SVC, which is not observed in a clausal coordinate reduction. When the referent of O1 is shared with V2 and its corresponding argument also functions as an object of V2 in the second core of the T1 PSVC, the same referent will not be overtly expressed after V2 in the SVC. On the basis of such an observation, I argue that the T1 PSVC does not differ from the T2 PSVC in terms of argument structure. The impossibility of passivising the “shared” object in the T1 PSVC, which is O1, suggests that this syntactic argument only stays within the argument domain of V1, identical to the object passivisation pattern observed in the ISVC and the T2 PSVC.

This account might superficially contradict the argumentation of an object sharing pattern in T1 PSVC presumed in existing literature (e.g. Baker 1989, Collins 1997). However, I think it is precisely a question of how the object sharing actually works in the T1 PSVC. If the overtly realised object is “shared” in terms of having the same status in the syntactic argument structure of either core in the T1 PSVC, there is no clear reason why this shared undergoer argument (i.e., the object) cannot be passivised or extracted from the same syntactic position in each core (as a kind of across-the-board extraction in an SVC). Therefore, it seems that the notion of “object sharing” in this case is better described at the semantic level rather than at the syntactic argument structure level in the T1 PSVC, such that the two verbs “share” the same patient argument in their semantic argument configuration.

In fact, an account of the object realisation pattern in the T1 PSVC can be seen in Chang

(1990). Based on the finding of “anaphoric ellipsis” in Huang (1989, 1991), Chang (1990) argues that the object realisation pattern in T1 PSVC forms on the basis of a linear temporal sequence (Tai 1985) or a temporal dependence between the two actions involved and co-reference between the first object and the deleted second object. This forward deletion (i.e., to the right side of the expression) of the second object (i.e., the unrealised, presumably existing O2), or the anaphoric ellipsis can only be fulfilled when there is a linear temporal order between actions and the presumed second object must have the same reference as the first object.

However, the co-reference requirement discussed above cannot be reduced to the notion of object sharing in the sense of Baker (1989). Expression (62) is an example of object sharing but there is no co-reference between the two identical object arguments. This expression forms on the basis of the bi-clausal structure (61) via coordinate reduction. Deletion of the first object *xigua* ‘watermelon’ in (62) follows the Directionality Constraint in Ross (1970, 251), which hypothesises that in a coordinate structure, if the identical elements occur on the left branch in a tree, the gapping is forward; if they occur on the right branch in a tree, the gapping is backward. The object *xigua* ‘watermelon’ in (61) takes the right branch in a tree; as the Directionality Constraint predicts, the object undergoes the backward coordinate reduction, as shown in (62). Note that in the clausal coordination shown in (61) and (62), there is no obligatory co-reference between O1 and O2 and no temporal dependence between the actions. The watermelons that are bought by the subject are not necessarily the same batch that s/he sells. The absence of a co-referential relationship between the shared objects is also compatible with the temporal independence between the actions of buying and selling, which may occur simultaneously or alternatively.

MC

- (61) *Ta mai3 xigua mai4 xigua.*
 he buy watermelon sell watermelon
 ‘He buys and sells watermelon.’

- (62) *Ta mai3 e mai4 xigua.*
 he buy sell watermelon
 ‘He buys and sells watermelon.’
 (Chang 1990, 296)

Compare the above coordinate sentences with the T1 PSVC in (63), where the co-reference between the realised object (O1) and the “underlying” or “invisible” O2 is obligatory.¹¹⁴ In addition, the two actions involved in the event have a temporal dependence on each other, as only after buying the watermelons can the subject then sell them. On the basis of this co-reference and temporal dependence, the second object argument must be deleted forward via anaphoric ellipsis, as proposed by Huang (1989, 1991), rather than following the Directionality Constraint (Ross 1970), which predicts a backward deletion, as (62) shows.

MC

- (63) *Ta mai3 xigua mai4 e.*
 3SG buy watermelon sell
 ‘S/he buys watermelons to sell.’
 (Chang 1990, 296)

The patterns of object deletion in the coordinate sentences and the T1 PSVC form a sharp contrast. From this contrastive behaviour in the two constructions, it can be seen that the notion of “object sharing” is too broad to capture the fine characteristics in the T1 PSVC. In particular, the notion of “object sharing” is not to be equated with co-reference between two arguments. Rather, “object sharing” seems to be a cover term for the realisation of a single object argument at the surface form, regardless of the pragmatic reference(s) of the underlying object arguments. Since both the complete co-reference and the temporal dependence between the underlying two object arguments

¹¹⁴ However, see Chang’s (1990, 298) inclusion of an example that realises an identical O2 in *ta zhong shu mai shu* ‘lit. S/he plant tree sell tree’ as an SVC. This analysis is compatible with his assumption that SVC is also a bi-clausal structure. Nevertheless, Chang’s inclusion of such an example seems to contradict the argument of anaphoric ellipsis and temporal dependence as characteristics of an SVC contra coordinate sentence in the paper.

in the T1 PSVC are preconditions for anaphoric ellipsis (forward deletion), the T1 PSVC involves an elaborate pattern of object argument fusion that correlates with both semantic characteristics. Therefore, the object argument fusion in the T1 PSVC should be better described as resulting in the realisation of the object only in the argument domain of V1, while the referent of this realised object is made accessible to the second core on the basis of the complete co-reference between the involved undergoer argument(s), as well as the temporal dependence between the involved actions denoted by the T1 PSVC.

In the above discussion, I have argued that the notion of “object sharing” is not precise to cover the elaborate characteristics of the T1 PSVC. I have shown that the T1 PSVC in MC and JSM behaves along the same lines as the ISVC and the T2 PSVC in terms of the impossibility of passivising O1. I have argued that this passivisation pattern is due to the structure of the core serialisation: the core SVCs, unlike the nuclear SVCs, allow partly syntactic independence in each core so that O1 only stays in the argument domain of V1, rather than being an object that stands for an across-the-board extraction of the object argument from both cores in the T1 PSVC. Moreover, I have argued that, in line with Chang (1990), the T1 PSVC exhibits two characteristics that are distinct from coordinate sentences: temporal dependence between the involved actions and the co-reference between the objects. These characteristics consequently require the obligatory forward deletion of the second object. Based on these findings, I conclude that the object argument in the T1 PSVC is fused on the basis of the complete co-reference between the undergoer arguments of the verbs. The complete co-reference in conjunction with the impact of the temporal dependence requires O2 not to be realised at the surface form in the T1 PSVC. In other words, the overtly realised object argument only stays within the argument domain of V1 in the T1 PSVC. It functions as the antecedent for the anaphor (or the coindexed argument) that follows V2, correlating with the fusion of the object argument(s) in the T1 PSVC. With this account, the passivisation pattern observed in the T1 PSVC is not considered an exception amongst other core SVCs. Rather, the behaviour of the realised object in the T1 PSVC makes it

an example exhibiting the general pattern of MVC formation (i.e., argument fusion) in the core SVCs and other MVCs.

O2 in the T2 PSVC can pass this diagnostic on the basis that a morpheme that denotes an explicit result is added to V2. The morpheme that denotes an actual result forms a C-E SVC with V2 in the PSVC. In (64) and (66), a phase marker *zhu* ‘hold on’¹¹⁵ in MC (Chao 1968 [2011], 478-479, Li and Thompson 1989, 65, Zhan 1989, 107, Zhu 2011/1982, 138, Lu 2012, 69) and *tioh* in JSM (Lien 1994, 1995, 2001, 2006) is used to indicate the successful accomplishment of an action. One is able to say *zhua zhu tuzi* ‘caught a rabbit’ in MC, or *liak tioh tsit tsiah tokau* ‘caught a cricket’ in JSM. In (65) and (67), a verb, *bao* ‘be full’ in MC, *si* ‘die’ in JSM, is added to V2 to specify an actual result of the action forming a C-E SVC in the second core. However, see Ch 11 also Section 11.2.1 for a discussion regarding the passivisation of O2 in the T2 PSVC.

MC

(64) *Na zhi tuzi bei wo wa dong zhua *(zhu) le.*
 that CLF rabbit PASS I dig hole catch hold.on PFV
 ‘That rabbit was caught by me digging a hole.’

(65) *Na zhi xiaoji bei ta zhua wenzi wei *(bao) le.*
 that CLF chicken PASS 3SG catch mosquito feed be.full PFV
 ‘The chicken was fed full by him/her catching mosquitoes.’

JSM

(66) *Hit tsiah tokau kih kan a iah tong liak *(tioh) lo.*
 that CLF cricket PASS child dig hole catch attach PFV
 ‘That cricket was caught by the children by digging holes.’

00:47:33.259 – 00:47:38.299 LTS VR0003 27-05-15

¹¹⁵ It is homomorphic to the verb *zhu* ‘live, stay, or cease/stop’ in MC (Chao 2011, 478, Lu 2012, 689). As a phase marker, this morpheme is glossed as ‘hold on’ (Li and Thompson 1989, 65). I follow the latter in glossing it as a phase marker.

- (67) *(Hit tsiah) kue khih kan a liak tokau tshi *(si) lo.*
 that CLF chicken PASS child catch cricket feed die PFV
 ‘That chicken died from being fed by the children catching crickets (probably
 poisonously contaminated).’
 00:54:03.167 – 00:54:06.527 LTS VR0003 27-05-15

It should be noted that the possibility of passivising the object argument of V2 in (64)-(67), contrasts with the impossibility of passivising the same object argument in a bi-clausal structure that forms with the same verbal constituents, as shown in (68)-(71). The coordinate structure in (68) and (70) is overtly marked with a coordinator *bingqie* ‘and’ (MC) or *kap* ‘and’ (JSM). This coordinator can also be replaced with a short prosodic break, which is highly likely to occur between clauses.

MC

- (68) *Ta zhua wenzi bingqie wei bao le na zhi ji.*
 3SG catch mosquito and feed be.full PFV that CLF chicken
 ‘S/he caught some mosquitoes and fed the chicken (so that it is full).’

- (69) **Na zhi ji bei ta zhua wenzi*
 that CLF chicken PASS 3SG catch mosquito

bingqie wei bao le.
 and feed be.full PFV

Intended: ‘*That chicken was fed full by him/her catching mosquitos.’

JSM

(constructed)

- (70) *Kan a iah tong kap liak tioh hit tsiah tokau.*
 child dig hole and catch attach that CLF cricket
 ‘The children dug a hole/holes and caught that cricket.’

- (71) **Tokau khih kan a iah tong kap liak tiah lo.*
 cricket PASS child dig hole and catch attach DM

Intended: ‘*The cricket was dug a hole by the children and they caught (it).’

10.2.3 Independent modification by temporal adverbial

A bi-clausal structure allows each clause to be modified by a distinct temporal adverbial. As shown in Section 2.5.3, it is natural to assign two different temporal adverbials in a PSE, which necessarily contains a clause that denotes a future-oriented event. An example is given in (72). Note that the absence of the purpose marker *yibian* ‘in order to’ in this bi-clausal structure may correspond into an unmarked coordinate sentence.

MC

- (72) *Wo zaoshang mai mianfen (yibian) xiawu bao jiaozi.*¹¹⁶
 I morning buy flour in.order.to afternoon wrap dumpling
 ‘I buy flour in the morning in order to make dumplings in the afternoon.’

The same verbal constituents that may occur in the T1 PSVC can also occur in a bi-clausal structure, whereby each clause can be modified by a distinct temporal

¹¹⁶ When a directional verb *lai* ‘come’ or *qu* ‘go’ functions as the purpose marker in a PSE, the temporal adverbial does not occur to its right. One cannot say:

MC

- (1) **Ta zaoshang mai le mianfen lai/qu xiawu bao jiaozi.*
 3SG in.the.morning buy PFV flour come/go in.the.afternoon wrap dumpling

The distinct behaviour in terms of allowing the adverbial to occur before the predicate verb in a subordinate clause between the purpose subordinate clause that is introduced by a typical purpose marker, *yibian* ‘in order to’, and that the one introduced by the directional verb *lai* ‘come’ or *qu* ‘go’, may be due to the low degree of grammaticalisation of the latter. That is, the function of marking the purpose clause of the directional verb must only be realised when it immediately introduces the clause, forming a tight-knit structure together. Contrastively, *yibian* ‘in order to’ is relatively independent from the two clauses that are connected by it.

However, while inserting a future temporal adverbial before the purpose marker that originates from a directional verb is grammatical, the resulting expression is very similar to a coordinated sentence, with the possibility to infer the purpose interpretation out of the context rather than from the purpose subordinate structure.

MC

- (2) *Ta zaoshang mai le mianfen, xiawu lai/qu bao jiaozi.*
 3SG in.the.morning buy PFV flour in.the.afternoon come/go wrap dumpling
 ‘S/he bought some flour in the morning (so that) s/he will make dumplings in the afternoon.’

It is common that directional verbs have grammaticalised to express tense meaning, particularly future tense (Bybee, Pagliuca and Perkins 1991, Bybee, Perkins and Pagliuca 1994). The directional verb *lai* ‘come’ or *qu* ‘go’ may indicate a future meaning in a multi-verb construction. Consequently, (2) is likely to be analysed as two coordinated clauses, the second of which contains a multi-verb construction with a grammaticalised directional verb that expresses a future meaning.

adverbial. Recall that the realised object argument in the T1 PSVC is not passivisable. Similarly, the overtly realised object argument in the “corresponding” bi-clausal structure is not passivisable. Nevertheless, since the realised object argument in the T1 PSVC stays in the argument domain of V1, it cannot undergo any movement or extraction from its position after V1 by passivisation or topicalisation (see Section 10.3.1 and Section 10.3.4). Although the shared object cannot be passivised as shown in (74) and (77), there is no such a structural constraint on topicalisation in bi-clausal structures as opposed to the T1 PSVC; the shared object can be extracted to the topic position, which functions as the topic of both clauses, as shown in (75) and (78).

MC

(73) *Wo jintian zhu miantiao mingtian chi.*

I today cook noodle tomorrow eat

‘I cook(ed) noodles today, and will eat them tomorrow.’

(74) **Miantiao bei wo jintian zhu mingtian chi.*

noodle PASS I today cook tomorrow eat

Intended: ‘The noodles were cooked by me today and (I) will eat (them) tomorrow.’

(75) *Miantiao wo jintian zhu mingtian chi.*

noodles I today cook tomorrow eat

‘The noodles, I cook(ed) (them) today and will eat (them) tomorrow.’

JSM

(76) *Gua kinna tsi bigua, minna tsiah.*

I today cook rice.noodle tomorrow eat

‘I cook(ed) noodles today, and will eat them tomorrow.’

00:00:00.150 - 00:00:05.160 LTS 052 10-09-15

- (77) **Huai e bigua kinna khih gua tsi, minna (beh) tsiah.*
 those rice.noodle today PASS I cook tomorrow will eat
 Intended: ‘Those rice noodles were cooked by me today and (I) will eat (them) tomorrow.’

(constructed)

- (78) *Hansti bei, gua kinna tsi, minna (beh) tsiah.*
 sweet.potato porridge I today cook tomorrow will eat
 ‘The sweet potato porridge, I cook(ed) (them) today and will eat (them) tomorrow.’

The verbal constituents that occur in the T2 PSVC can also occur in a bi-clausal structure, which allows each verbal constituent to be modified by a distinct temporal adverbial. A correlate of the bi-clausal structure is that even if V2 is modified by a phasal marker, or is followed by a verb that denotes a result, O2 cannot be passivised. Recall that it is ungrammatical to passivise the object of V2 in a coordinate structure, as shown in (69) and (71). Assigning a distinct temporal adverbial to each clause only makes the passivisation worse. The explicit coordinators in (69) and (71) are removed in order to increase the formal resemblance of the expressions to the SVCs (See Section 2.5.8.1).

MC

- (79) **Na zhi ji bei ta gangcai zhua wenzhi*
 that CLF chicken PASS 3SG just.now catch mosquito

xianzai wei bao le.

now feed be.full PFV

Intended: ‘??The chicken was now fed full by me catching mosquito just now.’

JSM

(80) **Tokau khih kan a tshinma iah tong tsittsun liak tloh lo.*
cricket PASS child just.now dig hole now catch attach DM

Intended: ‘??The cricket was now caught by the children digging a hole/holes just now.’

10.2.4 Independent marking of viewpoint aspect

The T1 PSVC can be distinguished from a bi-clausal structure with regard to independent marking of the viewpoint aspect. Occurring in the latter, the verbal constituents can be explicitly marked by the same viewpoint aspect value, as illustrated in (81) and (84). In MC, the object argument may be passivised within the first clause, as shown in (82). However, the passivisation leaves the second clause incomplete and renders the whole resulting expression awkward. The JSM expression (85) is also awkward. In spite of the failure to passivise the object, the inter-clausal diagnostic of independent negation requires each clause to be separately negated, as shown in (83) and (86), which clearly indicates that (81) and (84) are bi-clausal structures.

MC

(81) *I zhai guo lajiao ye chi guo.*
I pluck EXP capsicum and eat EXP

‘I plucked capsicums before and ate them before.’

(82) ??*Lajiao bei wo zhai guo, (ye) chi guo.*
capsicum PASS I pluck EXP and eat EXP

Intended: ‘??The capsicums were plucked by me and were eaten before.’

(83) *Wo mei zhai guo lajiao ye *(mei) chi guo.*
I NEG pluck EXP capsicum and NEG eat EXP

‘I never plucked capsicums before and I never ate them before.’

JSM

(84) *Gua pat ban tioh tshintsio, (koh) pat tsiah tioh.*

I before pluck EXP green.capsicum and before each EXP

‘I plucked green capsicums before and ate them before.’

00:00:00.600 - 00:00:05.310 LTS 024 10-09-15

(85) **Huai e tshinsio kkih gua pat ban tioh,*

those green.capsicum PASS I beforepluck EXP

(koh) pat tsiah tioh.

and before eat EXP

Intended: ‘Those green capsicums were plucked by me and were eaten by me before.’

(86) *Gua m pat ban tioh tshintsio,*

I NEG before pluck EXP green.capsicum

*(koh) *(m) pat tsiah tioh.*

and NEG before eat EXP

‘I never plucked green capsicums before and never ate them before.’

00:00:00.460 - 00:00:04.600 LTS 055 10-09-15

A similar observation can be made for the T2 PSVC in both varieties. The same string of verbs and arguments can occur either in the T2 PSVC or in a bi-clausal structure. Each clause in (87) and (90) is overtly marked by an experiential marker. The object of V2 in such a bi-clausal structure cannot be passivised, as shown in (88) and (91). Each clause must be independently negated by a negative marker in (89) and (92), suggesting that they are bi-clausal structures.

MC

(87) *Wa wa guo dong ye zhua guo tuzi.*
 I dig EXP hole and catch EXP rabbit
 ‘I dug holes before and I caught rabbits before.’

(88) **Tuzi bei wo wa guo dong (ye) zhua guo.*
 rabbit PASS I dig EXP hole and catch EXP
 Intended: ‘The rabbit(s) were/was caught by me digging a hole before.’

(89) *Wo mei wa guo dong ye *(mei) zhua guo tuzi.*
 I NEG dig EXP hole and NEG catch EXP rabbit
 ‘I never dug holes before and I never caught rabbits before.’

JSM

(90) *Gua pat iah tloh tong, (koh) pat liak tloh tokau.*
 I before dig EXP hole and before catch EXP cricket
 ‘I dug holes before and I caught crickets before.’
 00:00:01.330 - 00:00:05.890 LTS 027 10-09-15

(91) **Tokau kih gua pat iah tloh tong, pat liak tloh.*
 cricket PASS I before dig EXP hole before catch EXP
 Intended: ‘The crickets were caught by me digging a hole before.’

(92) *Gua m pat iah tloh tong, koh *(m) pat liak tloh tokau.*
 I NEGbefore dig EXP hole and NEG before catch EXP cricket
 ‘I never dug holes before and I never caught crickets before.’
 00:00:01.040 - 00:00:05.610 LTS 028 10-09-15

Each clause in a bi-clausal structure may have a different viewpoint aspect, as opposed

to the SVCs. As I applied the diagnostic with the experiential aspect and the progressive aspect, it seems that the resulting expressions denote two distantly related actions, which is difficult to be interpreted that the undergoer in the first action is necessarily involved in the second action. Moreover, the absence of the co-reference in this case is in contrast with the obligatory co-reference in the T1 PSVC (see a discussion in Section 10.2.2). In (93), the noodles that the subject cooked do not have to be the food that the subject is eating. Likewise, in (96), the subject could have plucked the green capsicums several years ago, and those plucked capsicums are certainly not the food being eaten by the subject. However, this is an issue of interpretation in an appropriate context, which should be teased apart from the grammaticality. As an example, (93) may be a quick answer on the phone given by the speaker who responds to random and successive questions thrown out by a fast talker in one breath. Note that (94) like (82), may allow local passivisation of the object in the first clause. This, however, leaves the second clause incomplete and the whole expression awkward. Expressions in (95) and (98) show that they are clearly bi-clausal, as each clause requires a sentential negation. That is, in order to negate both sub-events, both V1 and V2 in a bi-clausal structure have to be negated, whereas in an SVC one negation can have scope over the entire structure.

MC

(93) ??*Wo zhu guo miantiao, zhengzai chi.*

I cook EXP noodle PROG eat

‘I cooked noodles before. I am eating (probably a meal, or noodles or other things).’

(94) ??*Miantiao bei wo zhu guo, zai chi.*

Noodles PASS I cook EXP PROG eat

Intended: ‘??The noodles were cooked by me, (I) am eating.’

(95) *Wo mei zhu guo miantiao, (ye) mei zai chi.*

I NEG cook EXP noodle and NEG PROG eat

‘I never cooked noodles and I am not eating.’

JSM

(96) ??*Gua (pat) ban tioh tshintsio, (tsittsun) leh tsiah.*

I before pluck attach green.capsicum now PROG eat

‘I plucked green capsicums before and I am now eating (a meal or capsicums, or anything else).’

00:00:01.380 - 00:00:05.580 LTS 030 10-09-15

(97) **Huai e tshintsio kkih gua (pat) ban tioh,*
those green.capsicum PASS I before pluck EXP

(tsittsun) leh tsiah

now PROG eat

Intended: ‘The green capsicums were plucked by me, and (I) am eating (them).’

(98) *Gua m pat ban tioh tshintsio,*

I NEG before pluck EXP green.capsicum

(tsittsun) bo leh tsiah.

now NEG PROG eat

‘I never plucked green capsicums and I am not eating’

00:00:00.790 - 00:00:05.390 LTS 032 10-09-15

Such a distinction on the (in)ability of accepting distinct viewpoint aspects can also be observed between the T2 PSVC and bi-clausal structures as well. Each clause in the bi-clausal structure can have a distinct viewpoint aspect, as shown in (99) and (103). The scenario in which the speaker construes the expressions can be a quick answer to successive unrelated questions. In MC, the object of V2 *tuzi* ‘rabbit’ in the bi-clausal structure (99) cannot be passivised, as shown in (100). This is in contrast with the

grammaticality of passivising the same argument in (101), a single clause which forms on the basis of the verbal constituent of the second clause in (99). Moreover, each clause can be independently negated, as illustrated in (102). In JSM, similarly, to passivise the object of V2 in (103) across a clausal boundary is ungrammatical, as shown in (104). The awkwardness in (105) arises due to the lack of speech coherence. The coherence is greatly reduced when the speaker has already negated the happening of an event that is a possible precondition before s/he negates a subsequent event (the crickets are sometimes caught to feed the chicken. If the event of catching crickets does not happen, then the feeding event presumably will not happen either). Though I do not have enough data to exemplify independent pre-V2 negation in JSM, it is assumed that when the first clause is affirmative, it is grammatical to negate the second clause, as shown in (106), an expression I constructed.

MC

(99) ??*Wo zhengzai wa dong, zhua guo tuzi.*
 I PROG dig hole catch EXP rabbit
 ‘I am digging holes. I caught rabbit before.’

(100) **Na zhi tuzi bei wo zhengzai wa dong, zhua guo.*
 that CLF rabbit PASS I PROG dig hole catch EXP
 Intended: ‘??That rabbit was caught by me digging holes now.’

(101) *Na zhi tuzi bei wo zhua guo.*
 that CLF rabbit PASS I catch EXP
 ‘That rabbit was caught by me before.’

(102) *Wo mei zai wa dong (ye) mei zhua guo tuzi.*
 I NEG PROG dig hole and NEG catch EXP rabbit
 ‘I am not digging holes and I am not catching rabbit.’

JSM

(103) *Kan a leh liak tokau, beh tshi kue.*

child PROG catch cricket will feed chicken

‘The children are catching crickets. They will feed the chicken (with the crickets or something else).’

00:06:031.765 - 00:06:34.985 LTS VR0004 24-05-15

(104) **Kue khih kan a leh liak tokau, beh tshi.*

chicken PASS child PROG catch cricket will feed

Intended: ‘The chicken was caught crickets by the children. They will feed the chicken.’

(105) *Kan a bo leh liak tokau, *(m si beh tshi kue).*

child NEG PROG catch cricket NEG COP will feed chicken

Intended: ‘The children are not catching crickets. (They) will not feed the chicken.’

(constructed)

(106) *Kan a leh liak tokau, m si beh tshi kue,*

child PROG catch cricket NEG COP will feed chicken

si beh kai thittho e.

COP will self play FOC

‘The children are catching crickets. (They) will not feed the chicken with the crickets. They will play with the crickets.’

10.2.5 Independent modification by a manner adverbial

Based on my observations, it seems that the T1 PSVC behaves differently from the T2 PSVC with regard to modification by different manner adverbials. As shown in (107)

and (110), the verbal constituents that occur in the T1 PSVC can occur in a bi-clausal structure and allow modification by different manner adverbials. However, the T1 PSVC does not allow modification by a single manner adverbial, as shown in (108), (109), (111) and (112). This is in contrast to the T2 PSVC, as shown in (115) and (118).

MC

(107) *Ta manmande zhu miantiao, *(zhu hao) chi de hen kuai.*
 3SG slowly cook noodle cook be.good eat SUB very quickly
 ‘S/he slowly cooked the noodles. After cooking, s/he ate very quickly.’

(108) **Ta manmande zhu miantiao chi.*
 3SG slowly cook noodles eat
 Intended: ‘S/he slowly cooked noodles to eat.’

(109) **Ta xunsude mai yifu chuan.*
 3SG quickly buy clothes wear
 Intended: ‘S/he quickly bought clothes to wear.’

JSM

(110) *Abu ban a tsi hantsi, tsi ho tsiah ia kin.*
 mother slowly cook sweet.potato cook be.good eat very quickly
 ‘Mother slowly cooked sweet potatoes. After cooking, s/he ate very quickly.’

00:38:14.088 - 00:38: 20.168 LTS VR0001-1 26-05-15

(111) **Abu banban a tsi hantsi tsiah.*
 mother slowly cook sweet.potato eat
 Intended: ‘S/he slowly cooked noodles to eat.’

(112) **Poli suisui bue sann tshin.*
 PN quickly buy clothes wear

Intended: ‘Poli quickly bought clothes to wear.’

The verbal constituents that occur in the T2 PSVC may also occur in a bi-clausal structure, each of which allows modification by a distinct manner adverbial, as shown in (113) in MC. The object of V2 cannot be passivised even on the occurrence of V3 that denotes a kind of result, as shown in (114) (cf. Section 10.2.2), suggesting the status of a bi-clausal structure. However, the diagnostic of modification by different adverbials does not come with a straightforward result in JSM data. The JSM expression (116) is constructed on the basis of the T2 PSVC *thiah tsua sia phui* ‘tear paper write letter’. However, it was rejected by my interviewees, who corrected me with (117) instead. In (117), the first clause allows the verbal constituent *thiah tsit tiunn tsua* ‘tear a piece of paper’ to be modified by the adverbial *ban a* ‘slowly’. The fourth clause (on the second line), *thiah kui puan lit* ‘tear for a long time’, further allows V1 to be modified by an adverbial denoting a temporal period to indicate that the action was slow and took a long time. In the last clause (the third line), it is the second verbal constituent *sia hosei* ‘write be.good’, which denotes an accomplishment, that accepts the modification by *suisui* ‘quickly’ to indicate that the action of writing a letter was conducted quickly. Therefore, each verbal constituent is indirectly modified by a distinct manner adverbial in different clauses. The multi-clausal structure is signalled by the occurrence of the adversative conjunction word *m kuh* ‘but’. In contrast, both MC and JSM data show that, when the T2 PSVC is modified by a single pre-V1 manner adverbial, its part, in particular the second core, does not allow modification by a distinct manner adverbial, as indicated by the cancellation test in (115) and (118).

MC

T2

(113) *Ta manmande wa dong, xunsudi zhong shu.*

3SG slowly dig hole quickly plant tree

‘S/he dug holes slowly, and planted trees quickly.’

(114) **Shu bei ta manmande wa dong, xunsudi zhong (hao) le.*
 Tree PASS 3SG slowly dig hole quickly plant be.good PFV
 Intended: ‘??The trees were quickly planted by him/her digging holes slowly.’

(115) *Ta manmande wa dong zhong shu*
 3SG slowly dig hole plant tree

(,**buguo ta zhong de hen kuai.*)
 but 3SG plant SUBORD very quickly

Intended: ‘S/he slowly dug holes to plant trees, but s/he planted trees very quickly.’

JSM
 T2

(116) **Gua thiah i tsit tiunn tsua, gua thiah a ia*
 I tear 3SG one CLF paper I tear SUBORD very

ban... m kuh suisui sia hosei.
 slowly but quickly write be.good

Intended: ‘I tore a piece of paper from him/her. I tore it very slowly, but I wrote (the letter) very quickly.’

00:46:17.122 - 00:46:29.191 LTS VR0001-1 26-05-15

(117) *Gua ban a thiah tsit tiunn tsua beh sia phui,*
 I slowly tear one CLF paper want/will write letter

thiah tsua thiah kui puann lit,
 tear paper tear many half day

m kuh suisui suah sia hosei.

but quickly then write be.good

‘I slowly tore a piece of paper (as) I want to write a letter. I tore on the paper for a great half of the day, but I wrote the letter very quickly.’

00:46:50.106 - 00:46:59.39 LTS VR0001-1 26-05-15

(118) *Kan a banban a iah tong liak tokau*
child slowly dig hole catch cricket

(, **m kuh i liak tokau suisui suah liak tioh.*)

but 3SG catch cricket quickly then catch EXP

Intended: ‘??The child slowly dug holes to catch crickets, but s/he quickly caught the crickets.’

00:05:46.95 – 00:05:54.285 LTS VR0004 24-05-15

A comparison between the T1 sub-type and the T2 sub-type shows that the two sub-types contrast with each other sharply, in that T1 does not allow a single pre-V1 adverbial modification, as opposed to T2. It seems rather awkward for V2 in the T1 PSVC to stay in the scope of such a modification shown in (108), (109), (111) and (112). However, I have not been able to provide an account for this phenomenon and I will leave it for future studies.

10.2.6 Prosodic structure

The prosodic diagnostic is not applicable in the cases where V1 takes an object (see Section 2.5.6 for details concerning the application of this diagnostic). Nevertheless, it is highly likely that the native speakers can place a prosodic break between two clauses rather than within the PSVC.

10.2.7 Interim Summary

As I have shown in the above discussion, the PSVC behaves differently from bi-clausal structures with regard to the inter-clausal diagnostics. When the same string of verbs occurs in a bi-clausal structure, the two clauses accept independent negation, modification by distinct temporal adverbials or distinct manner adverbials and independent marking by distinct or identical viewpoint aspect(s), as opposed to the PSVC. In conjunction with these diagnostics, the CSC and passivisation of O2 can be used to diagnose the bi-clausal status of the resulting expressions. A prosodic break is less likely to occur within the PSVC, as opposed to bi-clausal structures, suggesting the monoclausality of the PSVC as well.

10.3 Intra-clausal diagnostics

10.3.1 Passivisation of O1

The PSVC forms on the basis of argument fusion. The T1 PSVC fuses both the subject and the object in the two cores, while the T2 PSVC only fuses the subject in the two cores. O1 in the T1 and T2 PSVC is not passivisable. I have shown in Section 10.2.2 that in the T1 PSVC, the only object argument that is realised on the surface form cannot be passivised in either MC or JSM. The impossibility of passivising this object argument is due to the structure of core serialisation in the T1 PSVC that requires its V1 to keep the object argument within its argument domain. Likewise, O1 in the T2 PSVC cannot be passivised either. As shown in (119) and (120), formed on the basis of (64) and (67), O1 cannot be passivised even if the sense of affectedness is explicitly expressed in the second core.

MC

- (119) **Dong bei wo wa zhua zhu le tuzi.*
hole PASS I dig catch hold.on PFV rabbit

Intended: ‘The hole was dug by me and a rabbit got caught in it.’

JSM

(120) **Tokau khih kan a liak tshi si hit tsiah kue.*

Cricket PASS child catch feed die that CLF chicken

Intended: ‘*The crickets were caught by the children, and they were fed the chickens. As a result, the chickens were dead.’

In Section 10.2.2, I have already shown that O2 in the T2 PSVC can be passivised when a clear sense of affectedness of O2 is expressed by the second core by means of adding a phasal marker or a resultant verb after V2. The examples are not repeated here. See also a discussion on the animacy of O2 in T2 PSVC and the result of passivisation in Ch. 11 Section 11.2.2.

10.3.2 Insertion of intervening material

The occurrence of O1 between the component verbs in the two sub-types of the PSVC meets the criterion of core SVCs (see a discussion on the criteria of non-contiguity in Section 2.7.2.2). The PSVC therefore is considered as a type of core SVC with regard to this diagnostic.

10.3.3 Coordination within the SVC

10.3.3.1 Coordination of V1O1 in the T1 PSVC

At the surface form, adding another verbal constituent to coordinate with the first core seems to result in a straightforward expression of coordination within the SVC. However, the expressions in (123) and (124) are ambiguous in meaning and structure in that they may be interpreted as a larger SVC, represented in (121), or a bi-clausal structure that includes a single clause and an SVC, represented in (122).

(121) [(VO)_{core1}·(VO)_{core1}(V)_{core2}]_{SVC}

(122) [VO]_{CL}[VOV]_{SVC}

The bi-clausal structure can be diagnosed by applying the inter-clausal diagnostic of independent negation and be differentiated from coordination within the SVC. I focus on the ability of allowing coordination of the first core within the PSVC in this sub-section. As can be seen in (123) and (124), the first cores in the original PSVC, namely *bao jiaozi* ‘wrap dumplings’ in MC and *ban tshintsio* ‘pluck green capsicum’ in JSM, are coordinated with *mai cai* ‘buy veggies’ (MC) and *thai kue ah* ‘kill poultry’ (JSM) respectively. Therefore, coordination of V1O1 in the T1 PSVC is grammatical, suggesting that the T1 PSVC is a semantic sub-type of core SVC.

MC

(123) *Wo jintian mai cai bao jiaozi chi.*

I today buy veggie wrap dumpling eat
‘I bought veggies and wrapped dumplings to eat.’

JSM

(124) *Abu kinna thai kue ah ban tshintsio tsiah.*

mother today kill chicken duck pluck green.capsicum eat

‘Today mother killed chicken and duck and plucked green capsicums to eat.’

00:06:19.034 - 00:06:23.034 LTS VR0001-1 26-05-15

In the PSVC, the pre-V1 negation may have an interpretation of negating some of its components, if not all, as shown in (126) and (128). It can also negate the entire construction and I do not illustrate it here (see negation in Section 10.2.1). This is in contrast with the bi-clausal structures, whereby each clause must be independently negated.

MC

(125) *Wo jintian mei mai cai bao jiaozi chi.*
I today NEG buy veggie wrap dumpling eat
'I didn't buy veggies and wrap dumplings to eat.'

(126) (125), *wo jintian mai jidan zuo jidangeng chi.* (SVC)
I today buy egg make egg.pudding eat
'(125), I bought eggs to make egg puddings to eat.'

JSM

(127) *Abu kinna bo thai kue ah, ban tshintsio tsiah.*
Mother today NEG kill chicken duck pluck green.capsicum eat
'Mother didn't kill poultry and (will) pluck(ed) green capsicums to eat.'
00:00:01.370 - 00:00:06.480 LTS 036 10-09-15

(128) (127), *i kinna thai hi ban kam a tit tsiah.* (SVC)
3SG today kill fish pluck tomato eat
'(127), she killed fish and plucked tomatoes to eat.'
00:00:01.278 - 00:00:10.918 LTS 037 10-09-15

10.3.3.2 Coordination of V2O2 in the T1 PSVC

Coordinating the second core does not give rise to the same ambiguity as coordinating the first core does. This is because of the co-reference that necessarily exists between the object argument of V1 and the coindexed object argument of V2 (see Section 10.2.2). As shown in (129), what can be pickled can only be the meat that was bought by the subject. As there is no object argument occurring after V2, the transitive verb *yan* 'pickle' cannot function as a single clause on its own without subject and object.¹¹⁷

¹¹⁷ The verb *yan* 'pickle' is transitive in that it must occur with its object when it occurs on its own; otherwise its "unrealised" object should share the reference with a preceding argument.

MC

(129) *Ta mai rou chi huozhe yan.*

3SG buy meat eat or pickle

‘S/he buys/bought meat to eat or to pickle.’

Expression (130) in JSM coordinates the second core *tsiah* ‘eat’ with another complex SVC *phang khi kongmathiann hau* ‘lit. hold go goddess.temple worship’. The complex SVC begins with a transitive verb *phang* ‘hold with two hands’. The object argument of this verb is not realised due to anaphoric ellipsis, which must share the same reference with the object *tsuiké* ‘fruit’.

JSM

(130) *Abu khi bue tsuiké tsiah a si phang khi*

mother go buy fruit eat or hold go

kongmathiann hau.

goddess.temple worship

‘Mother went to buy fruits to eat or hold them to the goddess temple for worshipping(?)’

00:00:00.360 - 00:00:06.820 LTS 051 10-09-15

10.3.3.3 Coordination in the T2 PSVC

In this section, I will base my discussion on MC data exclusively. This is because the complexity in distinguishing underlying structures by means of applying different diagnostics presented too many difficulties for JSM native speakers during investigations. I will leave JSM data concerning coordination within the T2 PSVC for future investigation.

The T2 PSVC does not impose co-reference between the objects. Both component verbs are transitive activity verbs and each of them takes a distinct object. These

characteristics in the T2 PSVC give rise to many possibilities of interpretation of the resulting expression of coordination. I take the T2 PSVC in (18) as the test case. A resulting expression of coordination may look like (131). There can be up to six types of interpretations with the same surface form. Each interpretation correlates with a distinct structure.

MC

(131) *Ta wa dong zhua tuzi kao rou.*

3SG dig hole catch rabbit roast meat

- a. 'S/he digs/dug holes, catches/caught rabbits, and roasts/roasted meat.' (three conjuncts in a coordinate complex sentence)
- b. 'S/he dug holes to catch rabbits and to roast meat.' (coordination of the second core in an SVC)
- c. 'S/he dug holes and caught rabbits to roast their meat.' (coordination of the first core in an SVC)
- d. 'S/he dug holes to catch rabbits, and (s/he) roasted meat.' (a purpose SVC and a clause)
- e. 'S/he dug holes, and caught rabbits to roast their meat.' (a clause and a purpose SVC)
- f. 'S/he dug holes to catch rabbits to roast their meat.' (successive purpose SVC)

In a complex SVC, corresponding to an interpretation of b., c., or f., a pre-V1 negation such as (132) is used as the sentential negation, which is compatible with different interpretations of the scope of negation. An example is (133), which replaces *tuzi* 'rabbit' with *tianshu* 'field mouse'. In (134), the whole SVC is negated by a pre-V1 negative marker *mei* 'not'. Note also that if the undergoer in the second action is also the undergoer that is involved in the third action, the object argument after V3 can be omitted. Such a co-reference is optional in interpretation b.

MC

(132) ?*Ta mei wa dong zhua tuzi kao rou.* (b./c./f.)
3SG NEG dig hole catch rabbit roast meat

(133) (132), *ta wa dong zhua tianshu kao.*
3SG dig hole catch field.mouse roast
'(132), s/he dug holes (to) catch field mice to roast.'

(134) (132), *ta shenme ye mei zuo.*
3SG what even NEG do
'(132), s/he did nothing.'

Other structures corresponding to interpretations a., d. and e. may accept negation in each clause. As shown in (135)-(137), each clause is possible to be negated by *mei* 'not'.

(135) *Ta mei wa dong, mei zhua tuzi, ye mei kao rou.* (a.)
3SG NEG dig hole NEG catch rabbit and NEG roast meat
'S/he didn't dig a hole, or catch rabbit, or roast meat.'

(136) *Ta mei wa dong zhua tuzi, ye mei kao rou.* (d.)
3SG NEG dig hole catch rabbit and NEG roast meat
'S/he didn't dig hole to catch rabbit, or roast meat.'

(137) *Ta mei wa dong, ye mei zhua tuzi kao rou.* (e.)
3SG NEG dig hole and NEG catch rabbit roast meat
'S/he didn't dig hole. And s/he didn't catch rabbit to roast meat.'

The above discussion suggests that there exists a factor of discourse coherence in interpretations of the given multi-verb expression. That is, if a PSVC reading has been

established in a preceding part of a multi-verb construction, it is more likely for the language user to interpret the upcoming verbal constituent as part of the PSVC, in particular as its core that denotes a purpose. In contrast, if such a PSVC reading does not exist in the preceding part of a multi-verb construction, it seems to be more difficult for the language users to decide whether the local verbal constituent is a single clause on its own or a core that denotes a means in a PSVC.

10.3.4 Obligatory topicalisation of the undergoer argument

There is no obligatory topicalisation of object in either the T1 PSVC or the T2 PSVC. In the T1 PSVC, there is only one object realised at the surface structure. V1 keeps its object argument within its argument domain and it cannot be moved out of the position after V1 either by passivisation (see Section 10.2.2) or topicalisation, as shown in (138) and (139).

MC

(138) **Miantiao wo zhu chi.*

noodle I cook eat

Intended: ‘The noodles, I cook(ed) to eat.’

JSM

(139) **Hansti bei, gua tsi tsiah.*¹¹⁸

sweet.potato porridge I cook eat

Intended: ‘The sweet potato porridge, I cook(ed) to eat.’

Unlike the T1 PSVC, each transitive verb in the T2 PSVC has its own object, which immediately follows the verb. O1 cannot be topicalised, as shown in (140) and (142), while O2 may be optionally topicalised, as shown in (141) and (143), subject to discourse needs. However, none of the objects is obligatorily topicalised.

¹¹⁸ In JSM, *tsi tsiah* is a verb which means ‘cook’. It is intransitive and cannot take any object. Therefore, *tsi tsiah hantsi bei* ‘lit. cook sweet potato porridge’ is not acceptable.

MC

(140) **Na ge dong, ta wa zhua tuzi.*

that CLF hole 3SG dig catch rabbit

Intended: ‘That hole, s/he dug (it) to catch rabbits.’

(141) *Tuzi, ta wa dong zhua.*

rabbit 3SG dig hole catch

‘The rabbit, s/he will dig/digs a hole to catch.’

JSM

(142) **Tsit kei tong, kan a iah liak tokau.*

that CLF hole child dig catch cricket

Intended: ‘This hole, the children dug (it) to catch crickets.’

(143) *Tokau, kan a iah tong liak.*

cricket child dig hole catch

‘The cricket(s), the children will dig/digs holes to catch.’

00:47:02.395 - 00:47:05.235 LTS VR0003 27-05-15

10.3.5 Interim Summary

In this section, I have shown that the PSVC meets the criteria of core SVCs in that both sub-types of the PSVC show non-contiguity between the component verbs and either core can be coordinated within the SVC. These behaviours of the PSVC correlate with the structure of core serialisation. That is, unlike the nuclear SVCs, the PSVC has two separate argument structures, which are linked by means of argument fusion. While the T2 PSVC forms on the basis of the subject argument fusion, both the subject and the object take part in argument fusion in the T1 PSVC.

10.4 Summary

In this chapter, I have discussed the characteristics of two sub-types of a core SVC: the Purposive SVC (or PSVC) in both MC and JSM. It differs from the bi-clausal structures with regard to the inter-clausal diagnostics. It meets the intra-clausal diagnostics of not passivising O1 and keeping it in the argument domain of V1 (Section 10.3.1) and of coordination within the SVC (Section 10.3.3). In addition, with regard to the diagnostic of inserting intervening material, the occurrence of O1 (or the non-contiguity between the serial verbs) also indicates its status of a core SVC (Section 10.3.2). The diagnostic of obligatory topicalisation does not apply in the PSVC (see Section 10.3.4).

The same string of verbs and argument(s) that occur in the PSVC can also occur in a bi-clausal structure, which must be accounted for when applying the diagnostics of passivisation, topicalisation and cancellation test. In particular, I provide an account for the impossibility of the second object argument to be overtly realised in the T1 PSVC. The pattern of object realisation in the T1 PSVC is determined by multiple factors, both structural and semantic. The structure of core serialisation allows the realised object argument in the T1 PSVC to stay only within the argument domain of V1. In addition to the temporal dependence between the involved actions denoted in the PSVC, the relation of co-reference between O1 and the undergoer argument of V2 (the potential O2) requires the two potential objects to undergo forward anaphoric ellipsis in the construction. With regard to the intra-clausal diagnostic of coordination within the SVC, it seems that coordinating the second core is less ambiguous than coordinating the first core due to the factor of discourse coherence. Since there is no such requirement to topicalise an undergoer argument in the PSVC, the diagnostic of obligatory topicalisation does not apply in this case.

Chapter Eleven: Conclusion and Discussion

11.1 Conclusion

Some existing studies of SVCs employ the criterion, which can be phrased as:

(CR1) “If two verbs A and B (with or without arguments) occur in a non-SVC structure X, they cannot be considered as serial verbs.”

However, based on my data of SVCs in MC and JSM, I observe the phenomenon that the same string of verbs may occur in different structures: bi-clausal structures, nuclear SVCs, or core SVCs. Such an observation is also made for Paamese (Crowley, 2002: 83) and White Hmong (Jarkey, 2015: 246-7). The same point has been made by Van Valin and LaPolla (1997), Van Valin (2005) and Bentley (2006). It is also noteworthy that the general observation that the same surface form can be associated with different syntact constructions can be made not only in MC and JSM, but also in East and mainland Southeast Asian languages in general, a phenomenon of multifunctionality, correlating with the high degree of hidden complexity in these languages (Bisang 2015a, b). Consequently, the existence of such a phenomenon shows that the criterion (CR1) is not sufficient to reduce the difficulties and confusion in identifying the status of SVCs.

In Section 2.5, I establish a set of inter-clausal diagnostics, which are employed to distinguish SVCs from other superficially similar constructions in a given language. This set contains seven different diagnostics (the coordinate structure constraint (CSC) is in most cases adopted in conjunction with other diagnostics). Most existing diagnostics that were considered as a means of distinguishing between syntactic sub-types of SVCs, such as negation, independent modification by manner adverbials

and prosodic structure (intonation pattern), have been reviewed in this study and are argued to be inter-clausal diagnostics on the basis of my observations of MC and JSM data. Amongst these diagnostics, I propose three novel inter-clausal diagnostics, such as passivisation of the object of V2, independent marking of viewpoint aspect and tone sandhi (prosodic structure), which all serve to distinguish between SVCs and bi-clausal structures. Some of the diagnostics should be adopted in conjunction with another: CSC in particular, negation and passivisation of the object of V2.

Moreover, in Section 2.6, I identify two syntactically distinguishable types of SVCs in MC and JSM corresponding to the nuclear and core distinction made in the RRG framework (Foley and Van Valin 1984, Foley and Olson 1985, Van Valin and LaPolla 1997). This distinction is made on the basis of a general consensus of the cross-linguistic classifications of the processes of monoclausal MVC formation (e.g., Butt 1993, 1997, Baker and Harvey 2010). The two processes of monoclausal MVC formation that are commonly observed in previous studies are termed *Predicate Fusion* and *Argument Fusion* in this study. Only via predicate fusion can the component verbs form a single predicate, which possesses a single set of arguments. In contrast, MVCs (including SVCs) that form via argument fusion have two separate argument structures, which are linked via fusing the identical arguments at the syntactic argument structures. The predicative verbs in the MVCs of the argument fusion type do not fuse and maintain partly independence in terms of argument structure.

Nuclear and core SVCs correspond to the MVCs that form on the basis of the two processes respectively. Nuclear SVCs form a tight structure by fusing the component verbs. A nuclear SVC possesses only one set of arguments on a par with a single verb. A core SVC has a relatively looser structure by linking the separate argument structures of the component verbs via fusing the identical arguments. The two verbs are partly independent from each other in terms of argument structure in particular.

The distinct structures of nuclear and core SVCs can be diagnosed by employing the

intra-clausal diagnostics. Section 2.7.2 introduces four intra-clausal diagnostics that I adopt in this study. Amongst them, two diagnostics are newly proposed in my study, including coordination within the SVC and obligatory topicalisation of the undergoer argument.

In this study, I exemplify the application of the above two sets of diagnostics and their ability to make the distinction between different structures in seven individual chapters. Each chapter discusses a distinct type of SVC. Part Two discusses the characteristics of two semantic sub-types of nuclear SVC: the Cause-Effect SVC (or C-E SVC) (Ch. 4) and the Manner-Motion SVC (or MSVC) (Ch. 5). I have shown that the two sub-types of nuclear SVC exhibit a tight structure with regard to the intra-clausal diagnostics in that, their component verbs share a single set of arguments and they cannot be separated from each other via inserting intervening material in between or coordination within the SVC. Part Three discusses five semantic sub-types of core SVC: the Resultative SVC (or RSVC) (Ch. 6), the Excessive SVC (or ESVC) (Ch. 7), the Instrumental SVC (or ISVC) (Ch. 8), the Caused-Motion SVC (or CSVC) (Ch. 9) and the Purposive SVC (or PSVC) (Ch. 10). These core SVCs behave differently from the nuclear SVCs in that, they exhibit a looser structure, which allows intervening material (O1 in most cases and the adverb *tai* ‘too’ in the ESVC) and coordination of a core in the SVC. Furthermore, the two cores in the RSVC or the ESVC jointly determine the position of the undergoer argument that must be topicalised to a position before V1 (For details see Section 2.7.2.4 and Section 7.3.4), a phenomenon which is not observed in the nuclear SVCs. In addition, the two cores in each sub-type of core SVC are partly independent from each other in terms of argument structure, but they must be linked in the core SVC by fusing or coindexing one or two identical core arguments. Argument fusion or coindexation may also correlate with the semantics of temporal dependence between the sub-events and obligatory co-referentiality between core arguments. This is particularly observed in the sub-type 1 of the PSVC (see Section 10.2.2).

While most types of SVCs have been observed in both MC and JSM, a few types are

only attested in one language variety, such as the ditransitive “send-give” type of the C-E SVC in MC (Ch. 4), several sub-types of the Resultative SVC (or RSVC) in JSM (Ch. 6), and the Excessive SVC (or ESVC) in MC (Ch. 7). Table 6. is provided below to summarise the behaviours of different types of SVCs with regard to both the inter-clausal and intra-clausal diagnostics.

Table 6. *Behaviours of SVCs in MC and JSM with regard to ten diagnostics (excluding CSC)*

	Inter-clausal							Intra-clausal			
		<i>iNEG</i>	<i>PASS</i> ₂	<i>TEMP</i>	<i>V-ASP</i>	<i>MAN</i>	<i>TS</i>	<i>PASS</i> ₁	<i>INS</i>	<i>COR</i>	<i>OBT</i>
Nuc	<i>C-E SVC</i>	X	√ ^①	X	X	X	√	-	X	X	X
	<i>MSVC</i>	X	-	X	X	X	√	-	X	X	-
Core	<i>RSVC</i>	X	-/X	X	X	X	√	-	√ ^③	√ ^④	√ ^⑤
	<i>ESVC</i>	X	√	X	X	X	√	-	√	√	√
	<i>ISVC</i>	X	√	X	X	X	-	X	-	√	X
	<i>CSVC</i>	X	-	X	X	X	-	-	-	√	X
	<i>T1 P</i>	X	-	X	X	X	-	X	-	√	X
	<i>T2 P</i>	X	? ^②	X	X	X	-	X	-	√	X
<i>Bi-CL</i>	-	√	X	√	√	√	X	-	-	-	-

X: unacceptable

√: acceptable

-: inapplicable

?: issues for further study

①: exceptions: O2 denotes a kind of skill in the expression “teach-know”

②: only grammatical when the second core is modified to express a higher degree of affectedness of O2.

③: exception: O2 is recipient

④: only in expressions in VOVO form

⑤: exceptions: expressions in VOVO form

In Ch. 1, three research questions are proposed to be addressed in this study. By establishing the inter-clausal diagnostics, I draw the line between SVCs and bi-clausal structures, therefore addressing the first issue. By proposing the intra-clausal diagnostics, I establish the distinction between two syntactic sub-types of SVCs, therefore addressing the second issue. By comparing the MC and JSM data, I find that not every semantic sub-type can be equally found in MC and JSM, therefore addressing

the third issue. Identification of the two commonly observed processes of MVC formation (i.e., predicate fusion and argument fusion) on the basis of MC and JSM data and two sets of diagnostics that distinguish SVCs from bi-clausal structures and between different sub-types of SVCs are my main contributions in this study.

11.2 Discussion

There are three interesting observations that I have also made in the study. I have not been able to provide a clear answer for them at this stage. However, I would like to point them out for futural studies. They include the phenomena that O2 in the sub-type 2 of the PSVC cannot be passivised which seems to make an exception to my inter-clausal diagnostic of passivisation, some particular characteristics of semantically subject-oriented expressions in JSM and MC and the topic position of the undergoer argument in obligatory topicalisation.

11.2.1 Passivisation of O2 in the sub-type 2 of the PSVC

Data in Ch. 10 Section 10.2.2 have shown that expressions that passivise O2 in the PSVC (sub-type 2 or T2) seem to have a low degree of acceptability. An example in MC is repeated below. The occurrence of the phase marker *zhu* ‘hold on’ increases the degree of acceptability in the expression.

MC

- (1) *Na zhi tuzi bei wo wa dong zhua *(zhu) le.*
 that CLF rabbit PASS I dig hole catch hold.on PFV
 ‘That rabbit was caught by me digging a hole.’

The phase marker *zhu* ‘hold on’ modifies the semantics of the overall nucleus of *zhua zhu* ‘lit. catch hold on, or caught’, therefore its occurrence after V2 does not change the structure of the second core. Its formation is within the nucleus. The nuclear level of

formation can be seen in (2)-(4), in that, with regard to topicalisation, they function as a single verb; the phase marker cannot be independently coordinated.

MC

Original expression

- (2) *Ta zhua zhu le na zhi tuzi.*
3SG catch hold.on PFV that CLF rabbit
'S/he caught that rabbit.'

Optional topicalisation of the undergoer argument

- (3) *Na zhi tuzi ta zhua zhu le.*
that CLF rabbit 3SG catch hold.on PFV
'That rabbit was caught by him/her.'

Ungrammaticality in independent coordination

- (4) **Ta zhua zhu bingqie lao le na zhi tuzi.*
3SG catch hold.on and be.steady PFV that CLF rabbit
Intended: 'S/he caught the rabbit and held it steady in hands.'

However, it is unclear why—in a comparison of the behaviour of O2 in the ISVC with that in the PSVC—a phase marker must be added in order to form a grammatical passivisation of O2 in the PSVC (cf. the ISVC in this respect in Section 8.2.2). Moreover, it seems that V2 on its own allows its object argument to be passivised without the phasal marker. For example, V2 *zhua* 'catch' in the single clause allows its object *na zhi tuzi* 'that rabbit' to be passivised, as shown in (6).

MC

- (5) *Ta zhua le na zhi tuzi.*
3SG catch PFV that CLF rabbit
'S/he caught that rabbit.'

- (6) *Na zhi tuzi bei ta zhua le.*
 that CLF rabbit PASS 3SG catch PFV
 ‘That rabbit was caught by him/her.’

From this expression, it seems that the PSVC shares some semantic similarity with the PSE, which is a bi-clausal structure and does not allow passivisation of O2 either. Nevertheless, by enhancing the animacy of the referent of O2, the degree of acceptability is enhanced to some extent if the resulting expression is not completely acceptable. I have consulted with a few native speakers of MC and the passive expression (8) that forms on the basis of (7) is reported to be acceptable by one native speaker, while another two speakers hesitate about its acceptability¹¹⁹.

MC

- (7) *Jingcha she quantao zhua le na ge jiaohuade xiongshou.*
 police set trap catch PFV that CLF foxy killer
 ‘The police set traps (and by doing so they) caught that foxy killer.’

- (8) *Na ge jiaohuade xiongshou bei jingcha she quantao zhua le.*
 that CLF foxy killer PASS police set trap catch PFV
 ‘That foxy killer was caught by the police by means of setting traps.’

While the PSVC basically needs a phasal marker after V2 to allow its O2 to be passivised, it is obvious that, with regard to the other inter-clausal diagnostics, it exhibits monoclausal characteristics. At the current stage, I am not able to analyse all the factors that may result in the (un)acceptability of passivisation of O2 in the PSVC. It might be due to pragmatic factors, or semantic factors, or even its semantic or syntactic similarity to the PSE. I shall leave this problem for further studies.

¹¹⁹ The two speakers who hesitated about its acceptability informed me that the resulting passive expression sounds more acceptable if the phasal marker is added after V2 as expression (1).

11.2.2 Some subject-oriented expressions of SVC

In my investigation, there are some subject-oriented expressions of SVC exhibiting some language-specific characteristics that are not included in the main text of the thesis. I will discuss these characteristics of these expressions in this section. Nevertheless, I am not able to provide an account for the fine semantic differences between these and the established nuclear or core types of SVC. These expressions that I have found include verb combinations that denote a resultative process, or, more precisely, a natural transition of physical status, such as “eat be.full” and “drink be.drunk”.

According to my criteria, in a core SVC which contains a transitive first core and an intransitive second core, if the undergoer argument of this core SVC has different syntactic argument functions with respect to two cores (i.e., the object in the first core and the subject in the second core), it must be obligatorily topicalised before V1 (see a detailed discussion in Section 2.7.2.4). However, in the expressions discussed in this section, the realised “object” argument does not seem to be the “undergoer” in the event. In the event denoted in (9) for example, it is the subject that changes its state, not the food. It is unacceptable to passivise this “food or drink” argument, as shown in (10). It also fails to occur in Jackendoff’s (1990) diagnostic “what happened to X is Y”, illustrated in (11). Presumably the same observation can be made in JSM.

MC

- (9) *Wo chi bao le fan.*
I eat be.full PFV meal
'I got full by eating the meal.'

- (10) **Fan bei wo chi bao le.*
meal PASS I eat be.full PFV

- (11) *What happened to the meal (*fan*) is that I got full (*wo chi bao le*).

An expression in JSM that deviates from the criterion of obligatory topicalisation that is employed to diagnose the status of core SVC is provided in (12). The argument *tsiu* ‘liquor’ is the object argument of V1 and it does not have a semantic relationship with V2, thus differing from my explanation of the condition of the obligatory topicalisation. Yet it cannot be placed back to the position after V2, as shown in (13).

JSM

- (12) *I tsiu lim tsui lo.*
3SG liquor drink be.drunk DM
‘I got drunk by drinking liquor.’
00:19:24.294 - 00:19:25.964 MT 15-45-VR00031-5-14

- (13) **I lim tsui tsiu lo.*
3SG drink be.drunk liquor DM
Intended: ‘I got drunk by drinking liquor.’

However, it also seems problematic to topicalise this argument to the position before the subject, as shown in (14).

JSM

- (14) **Tsiu I lim tsui lo.*
liquor 3SG drink be.drunk DM
Intended: ‘I got drunk by drinking liquor.’

The behaviour of this argument further contrasts with the behaviour of the undergoer argument in the other core SVCs that require obligatory topicalisation of it in the construction (e.g., the Excessive SVC). The obligatorily topicalised undergoer argument can occur either before the subject argument or immediately after it, as illustrated in (15)

and (16) respectively.

JSM

- (15) *Hit tiunn tsua gua thiah bo phua.*
that CLF paper I tear NEG be.broken
'That piece of paper, I tore it but it didn't come apart.'
00:04:01.860 - 00:04:03.230 MT 15-45-VR00031-5-14

- (16) *Gua hit tiunn tsua thiah bo phua*
I that CLF paper tear NEG be.broken
'That piece of paper, I tore it but it didn't come apart.'
00:03:11.630 - 00:03:12.940 MT 15-45-VR00031-5-14

It is also noteworthy that, in JSM, the serial verbs *lim tsui* 'drink be.drunk' can also occur in the VOV surface form. That is, the argument *sotsiu* 'liquor' occurs immediately after V1, which introduces it.

JSM

- (17) *Gua lim sotsiu tsui lo*
I drink liquor be.drunk DM
'I got drunk by drinking liquor.'
01:11:43.330 - 01:11:45.300 B 15-31 VR0001 29-4-14

A very similar observation is made in MC. I have shown in Ch. 4 that the serial verbs *chi bao* 'eat be.full' can occur in a nuclear SVC, where they cannot be separated and they do not require the realised argument *fan* 'meal' to undergo topicalisation. However, like the core serial verbs *lim tsui* 'drink be.drunk' in JSM, when the verbs *chi bao* 'eat be.full' occur in a core SVC, the argument *fan* 'meal' must be topicalised, as shown in (18) and (19), contrasting with (20).

MC

- (18) *Fan, wo chi tai bao.*
meal I eat too be.full
'The meal, I got too full after it.'

- (19) *Wo fan chi tai bao.*
I meal eat too be.full
'The meal, I got too full after it.'

- (20) **Wo chi tai bao fan.*¹²⁰
I eat too be.full meal
Intended: 'The meal, I got too full after it.'

Again, the argument *fan* 'meal' does not hold a position with regard to the argument structure of V2. Therefore, there is no such difference regarding the syntactic argument function of the same undergoer argument with respect to different cores in this case either (cf. the RSVC and the ESVC). However, obligatory topicalisation of the argument is still observed in this case.

The same observation of obligatory topicalisation can also be made with the serial verbs *he zui* 'drink be drunk' in MC, which can also occur in a nuclear SVC (see Ch. 4 Section 4.3.4) or a core SVC. Note that the sentence topic position (Section 2.2) for the argument *jiu* 'liquor' is not available for the expression of the core SVC either¹²¹.

MC

- (21) **Wo he zui le jiu.*
I drink be.drunk PFV liquor
Intended: 'I got drunk by drinking liquor.'

¹²⁰ *Fan* 'meal' cannot occur immediately after V1 either. The expression **wo chi fan tai bao* 'lit. I eat meal too be.full' is not acceptable..

¹²¹ As shown in Section 4.3.4 in a footnote, I have noted that the topic position before the subject is not available for the argument *jiu* 'liquor' of the nuclear serial verbs *he zui* 'drink be.drunk'.

(22) *Wo jiu he tai zui le.*
 I liquor drink too be.drunk PFV
 ‘The liquor, I got too drunk by drinking it.’

(23) **Jiu, wo he tai zui le.*
 liquorI drink too be.drunk PFV
 Intended: ‘The liquor, I got too drunk by drinking it.’

In order to avoid giving a misleading impression, I did not include expressions that contain the verbs *tsiah pa* ‘eat be.full’ in JSM in preceding chapters due to lack of supporting data. The serial verbs *tsiah pa* ‘eat be.full’ in JSM do not co-occur with any argument that denotes food in any position in the expression. The only grammatical way to say “I am full after eating” is simply (24).

JSM

(24) *Gua tsiah pa lo.*
 I eat be.full DM
 ‘I am full after eating.’
 00:23:22.843 - 00:23:24.207 MF 112013

V2 in (24) does not undergo independent coordination within the SVC, as shown in (25), suggesting its status as a nuclear SVC.

JSM

(25) **Gua tsiah pa kap hosei lo.*
 I eat be.full and be.good DM
 Intended: ‘I am full by eating and completed eating.’

In addition, I also heard people saying expression (26), which contains the same serial verbs as in (24). Expression (26) is a core SVC, which allows a degree adverb *siunn*

‘too’ to occur between serial verbs. Unfortunately, it was not recorded in time during my fieldwork.

JSM

- (26) *Gua tsiah siunn pa.*
 I eat too be.full
 ‘I got too full by eating.’

Without recorded evidence, I am not able to show that the same string of verbs *tsiah pa* ‘eat be.full’ can indeed occur in either a nuclear SVC or a core SVC. Therefore, the issues raised in the above discussion will remain a matter for further research.

11.2.3 Topic position of the undergoer argument in obligatory topicalisation

Obligatory topicalisation of the undergoer argument in the core SVC seems to correlate with the possibility of such an argument to occur in relativisation that forms on the subject argument. An example is the ESVC. The undergoer argument must be topicalised in the ESVC, as shown in (28) and (29). Its undergoer argument *gou* ‘ditch’ cannot occur in the classic position of object argument (i.e., post-verbally) in the construction, as shown in (27). The ESVC can form a grammatical relative clause on the subject argument, as shown in (30).

MC

- (27) **Gongrenmen wa qian le gou.* (SVVO)
 workers dig be.shallow LE ditch
 Intended: ‘The workers have dug the ditch(es) too shallow.’
- (28) *Gou gongrenmen wa qian le.* (TopSVV)
 ditch workers dig be.shallow LE
 ‘The ditch(s), the workers have dug it/them too shallow.’

(29) *Gongrenmen gou wan qian le.* (STopVV)
workers ditch dig be.shallow LE
‘The ditch(s), the works have dug it/them too shallow.’

(30) *Gou wa qian le de gongrenmen lai le.*
ditch dig be.shallow LE REL workers come PFV
‘The workers who have dug the ditch too shallow came.’

The same pattern of obligatory topicalisation of the undergoer argument is also observed in several sub-types of the RSVC in JSM. These expressions of obligatory topicalisation of the undergoer argument in JSM also accept relativisation on subject argument. For example, in Ch. 6, the expression *khau bo tam* ‘cry not be.wet’ in JSM requires its object argument *tshiukuna* ‘handkerchief’ to be topicalised (see Section 6.3.4). This expression also accepts relativisation on the subject argument, as shown in (31).

JSM

(31) *Tshiukuna khau bo tam e kan a bo leh khau lo.*
handkerchief cry not be.wet REL child not PROG cry DM
‘The child whose handkerchief didn’t become wet due to his/her crying is not crying now.’

00:00:01.230 - 00:00:06.780 LTS 47-3-1 10-09-15

In contrast with the ESVC in MC and the sub-types of the RSVC in JSM, topicalisation of the undergoer argument is optional in the C-E SVC; see (32)-0, which are expressions that I repeat from Ch. 4. The relative clause on the subject argument is not acceptable on the basis of the optional topicalisation in the C-E SVC, as shown in (35).

MC

(32) *Wo da si le cangying.* (SVVO)

I hit die PFV fly

‘I hit the fly dead.’

(33) *Cangying, wo da si le.* (TopSVV)

fly I hit die PFV

‘The fly, I hit it dead.’

(34) *Wo cangying da si le (, wenzi hai mei).* (STopVV)

I fly hit die PFV mosquito yet not

‘I hit the FLY dead, ((but) the MOSQUITO, I have not yet (hit dead)).’

(35) **Cangying da si (le) de fuwuyuan keyi zou le.*

fly hit die PFV REL waiter may go PFV

Intended: ‘The waiters who hit the flies/fly dead may go.’

The other sub-types of SVC in MC and JSM that only allow optional topicalisation of the undergoer argument (usually O2) do not form an acceptable relative clause on the subject either. For their behaviours, I do not illustrate here.

I have briefly discussed the types of topic identified in MC in Section 2.2 (Clause structure). In my study, I assume that a sentence topic occurring before the subject takes a clause-external position and a secondary topic occurring after the subject and before V1 in addition to the default topic (the subject is treated as a kind of default topic). As shown in earlier paragraphs, with regard to the possibility of topicalising an undergoer argument to either the sentence topic position or the secondary topic position, the ESVC in MC and a few sub-types of the RSVC in JSM do not show any difference from the C-E SVC. However, only the former two SVCs can occur in a relative clause on subject, not the latter. The split behaviour of these SVCs with regard to the (in)ability of

occurring in a relative clause that forms on the subject gives rise to the question, as to whether the obligatorily topicalised undergoer argument takes a topic position that is from the same as the ones of the sentence topic and the secondary topic.

Examining a similar phenomenon of obligatory topicalisation in Taiwan STM in particular, Lee (2008)¹²² argues that such a type of topicalisation of the undergoer argument is conditioned by the syntactic structure. Unfortunately, in his/her proposal, no account has been provided for the exact position of such a topicalised undergoer argument in the clause. I also leave this question open for future studies.

¹²² The author does not look at the aspect of relativisation based on the obligatory topicalisation.

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