Grammaticalization of the Verb 以往 已 as an Aspectual Marker in Middle Chinese
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1. Introduction

Topic: Grammaticalization of 已 yi from verb to telic aspect marker
(Similar development to Mod Man 了 le)

Middle Chinese VO-ASP (已 yi ‘stop, complete’, 竟 jìng ‘finish’, 畢, bì ‘finish’ or 託 qi ‘finish, cease’) as nonfinite subordinate clauses indicating completion of one event before beginning of second event

(1) a. 王升車已，群臣跪賀
wáng shēng chē yǐ, qún chén guì hè
king mount carriage YI, all ministers kneel bless
‘After the king mounted the carriage, all ministers knelt down and gave their blessings.’ (Zhongben qi jing 2nd -3rd c.) (Taishō 4, no.196, p.153b)

b. 佛坐飯竟，行澡水畢，為說經法。
fó zuò fàn jìng, xíng zǎo shuǐ bì, wèi shuō jīng fǎ
Buddha sit eat finish, go wash water finish, for say sutra dharma
‘After the Buddha had sat down and finished his meal, and after he had washed himself, he explained the sutra and the dharma (to them).’ (Zhongben qi jing, 2nd -3rd c.) (Taishō 4, no.196, p.162a)

Aspect markers 已 yi, 竟 jìng, 畢, bì, or 託 qi grammaticalized from verbs.

(2) a. 女舞未竟，忽然不見，
nǚ wǔ wèi jìng, hūrán bù xiàn
woman dance NEGfinish, suddenly NEG visible
‘The woman had not stopped dancing yet when she suddenly became invisible.’ (Zhongben qi jing, 2nd -3rd c.) (Taishō 4, no.196, p.149b)

b. 數譖不已，王頗惑之。
shuò zèn bù yǐ, wáng pō huò zhī
several slander NEG finish, king quite confuse OBJ
‘The various slandering had not stopped, and the king found it quite confusing.’ (Zhongben qi jing, 2nd -3rd c.) (Taishō 4, no.196, p.157c)

Proposal:
Reanalysis: YI-V ‘terminate’ > YI-ASP (secondary predicate marking end point of an event) in Early Middle Chinese (EMC) (1st century BCE)
Trigger: Loss of aspectual morphology at the end of Archaic Chinese (2nd – 1st C. BCE), neutralizing of the formal distinction between telic and atelic verbs

2. Previous Analyses

Q: V-YI > YI-ASP as a native Chinese development or borrowing from Sanskrit?

Cheung (1977): Borrowing as a calque for Sanskrit gerundial suffix –tvā, which also surfaced in clause-final position

Mei (1999): YI-ASP as a native Chinese development
   => 1st century BCE, before the introduction of Buddhism to China

(3) a. 鑽 中 已，又 灼 龜 頭
   zuān zhōng yǐ，yòu zhúo guī shǒu
   bore center YI, again burn tortoise head
   ‘After boring through the center (of the shell), then they burned the tortoise head.’ (Shiji: 128; 3240, 100 BCE; from Mei 1999:289)

b. 飯 已， 盡 懷 其 餘 肉 持 去，
   fàn yǐ，jìn huái qí yú ròu chí qù，
   eat finish, completely hold.in.bosom POSS rest meat take leave,
   衣 盡 污
   yī jìn wū
   dress completely dirty
   ‘After eating, they took all their remaining meat with them (in their bosom) and left, and their clothes became completely soiled.’ (Shiji: 126; 3205; from Mei 1999:289)

1. YI-ASP1 with atelic events supplying the end point (native Chinese development)
2. YI-ASP2 with telic predicates signaling accomplishment/achievement (Sanskrit influence)

(4) a. 然 於 後 世， 事 究 竟 已， 言 談 斐 粋
   rān yú hòu shì，shì jiùjìng yǐ，yán tán fēi càn
   so in later generation, affair thoroughly.realize YI, utterance brilliant
   ‘So in later generations, after these things had been thoroughly comprehended, words and utterance became brilliant, …’ (Zheng fahua jing, 3rd century) (Taishō 9, no.263, p.88a)

b. 佛 滅 度 已，受 持 經 卷.
   fó mièdù yǐ，shòu chí jīngjuàn
   Buddha reach.extinction YI, receive hold scripture
   ‘… and after the Buddha had reached his extinction, they will receive and hold on to the scriptures.’ (Zheng fahua jing, 3rd c.) (Taishō 9, no.263, p.101a)
Proposal for the Origin(s)
YI-V > YI-ASP as native Chinese development
YI-ASP1 and YI-ASP2 did not have separate origins.
=> YI-ASP1 emerged first; YI-ASP2 was a natural extension in response to the loss of telicity marking on verbs.

3. Aspect in Late Archaic Chinese (5th – 2nd C. BCE)
Sinitic languages: member of the Tibeto-Burman / Sino-Tibetan language family
=> Verbal (derivational) morphology in Pre-Archaic Chinese (before 11th c. BCE): (LaPolla 2003, Meisterernst 2015); no inflectional morphology.

Previous hypothesis on aspectual marking:
=> Morphological marking of the imperfective and perfective aspect (Outer Aspect)
1. [+/− VOICE] alternation of the root initial (voicing caused by former nasal prefix) (Karlgren 1933; Mei 1988, Baxter and Sagart 1998, Hong and Yang 2010; etc.)
2. *-s (perfective aspect) > falling tone (qùshēng 去聲) (Haudricourt 1954, Downer 1959, Sagart 1999, etc.).

(5) Suffix *-s and the verb (chí/) zhì治 in Archaic Chinese (Jin Lixin 2006):
=> [-SUFFIX] = transitive and/or imperfective aspect: *r-de
=> [+SUFFIX] = unaccusative and perfective aspect (resultant state): *r-de-s

(6) a. 政以治民，刑以正邪．
Zhèng yì zhì mín, xíng yì zhèng xié
‘The government is necessary in order to correct the people, the punishments are necessary to correct the bad.’ (Zuozhuan, Yin 11, 5th-4th c. BCE)

b. 使為左師以聽政，於是宋治．
Shǐ wéi zuōshī yǐ tīngzhèng, yúshì Sòng zhì (*r-de-s)
‘He made him Zuo Shí and let him manage the government, and thereupon Song became well ordered.’ (Zuozhuan, Xi 9, 5th-4th c. BCE)

(7) [+/− VOICE] alternation and the verb huài 壞 in Archaic Chinese (Jin Lixin 2006:84):
=> [-VOICE] = transitive and/or imperfective aspect: qlur-s
=> [+VOICE] = unaccusative and perfective aspect (resultant state): qlur-s

(8) a. 是謂天子壞法亂紀。
(Liji 09.02.07) (LAC)
Shì wèi tiān zǐ huài (qlur-s) fǎ luàn jì
This mean heaven son destroy law disturb rule
‘… this means that the son of heaven destroys the laws and disturbs the rules.’

b. 君子三年不為禮，禮必壞；
(Lunyu 17.21/1) (LAC)
Jūnzǐ sān nián bù wéi lǐ, lǐ bì
Gentleman three year NEG make correct.form, correct.form certainly
Refinement:

=> Aktionsart formation belongs to derivational morphology adding semantic features such as ingressivity, terminativity, iterativity, etc.

=> Aspectual morphology in the Inner Aspect Phrase (Travis 2010) checking telicity (aktionsart) features, not in the Outer Aspect Phrase (imperfective - perfective) (Meisterernst 2015)

=> No affix: causative variant, no endpoint is implied;

=> With affix: unaccusative, telic, resultative.

Verbs with aspectual morphology were only rarely modified by aspectual adverbs jì 既 and yǐ 已 (perfective aspect).

=> Activity verbs (e.g. shí 食 ‘eat’, yán 言, MC shuō 說 ‘speak’) with aspectual adverbs. Adverb adds an end point to the event.

(9) a. 吾 既言之矣，敢不勉乎！
wú jì yán zhī yǐ, gǎn bù miǎn hū
1P YI say OBJ SFP, dare NEG make.effort SFP
‘After I said that, could I dare not to make the utmost effort!’ (Zuozhuan, Ai 11.1.10, 5th-4th c. BCE)

b. 既食，而後食之。
jì shí, ér hòu sì zhī
JI eat, CON afterwards feed OBJ
‘After they had eaten, they let him eat.’ (Zuozhuan, Xiang 24.8.3, 5th-4th c. BCE)

Parallel to early function of YI-ASP as supplying an endpoint (西漢 and Early Buddhist literature; see also Wei 2015)

(10) 佛說已，弟子當受，令是說當為解利。
fó shuō yǐ, dìzǐ dāng shòu, líng shì shuō
Buddha talk YI, disciple DANG receive, make this talk
DANG be explain advantage
‘After the Buddha had spoken, the disciples were about to accept, and made him explain what the advantages of this talk would be.’ (Ren ben yu sheng jing, 2nd c.) (Taishō 1, n. 14, p. 244a)

Morphological distinctions started to lose their transparency.
1. Increase in the employment of aspectual adverbs (with both atelic & telic predicates)
(11) a. 问之曰: 「吾城郭已治, 守备已具, 钱粟已足, 甲兵有餘, 
具, 钱粟已足, 甲兵有餘, 
ready, money grain YI sufficient, armour weapon have surplus, 
‘... asked him: “My walls are already in good order, my defence 
arrangements are already ready, money and cereals are sufficient, the 
armours and weapons are numerous,”’ (Han Fei Zi 10.6.16, 3rd c. BCE)

b. 季子曰: 「堯固已治天下矣, 
Jizi say: Yao certainly YI regulate empire SFP
‘Jizi said: “Yao had certainly already regulated the empire.”’ (Lushi chunqiu 25.3.2.1, 3rd c. BCE)

2. Start of the disyllabification process
=> Resultant state readings are confined to adjectives >>>> development of a new disyllabic causative verb
=> huài 坏 (broken) ≥ dāhuài 打坏 (break-broken); implicit activity becomes explicit in the disyllabification process (Hu 2016).

(12) a. 是身為譬如會壞城, 多怨家。
this body be like meet smashed city, many angry family
‘This body will be like meeting a smashed city with many angry families.’ (Daodijing, 2nd c. (Taishō 15, n. 607, p. 236a)

b. 出外令人打壞天祠。
he went out and ordered someone to destroy the brahmanic temple.
‘he went out and ordered someone to destroy the brahmanic temple.’

Connection with YI-ASP:
=> Loss of aspectual morphological distinctions as trigger for YI-V > YI-ASP in Early Middle Chinese

4. Evolution of YI-V to YI-ASP as End-point Denoting Secondary Predicate

1. Loss of derivational affixes distinguishing telic from atelic verbs
2. Ambiguity between N and V
3. Emergence of VP-internal secondary predicates
4. YI-V > YI-ASP (as secondary predicate denoting end point)

4.1. Structural Environment for the Reanalysis

Mei (1999): V O NEG YI-V > V O YI-ASP (via deletion of NEG)
(13) a. 行之不已，是謂履理也.
   xíng zhī bù yǐ, shì wèi lǐ lǐ yě
   To walk OBJ NEG stop, this call tread principle SFP
   ‘To walk on it without stopping, this is called treading along [on the path of] the principles.’ (Han Fei Zi 8.1.3, 3rd c. BCE)
b. 智伯兼范、中行而攻趙不已.
   Zhì Bó jiān Fàn, Zhòngháng ér gōng Zhào bù yǐ
   Zhi Bo unite Fan, Zhonghang CON attack Zhao NEG stop
   ‘Zhi Bo joined Fan and Zhong Hang and attacked Zhao without end.’ (Han Fei Zi 21.3.1, 3rd c. BCE)

Problem: Reanalysis requires ambiguity. But 行之不已 and 攻趙不已 (event not completed) are not at all similar in meaning to 行之已 and 攻趙已 (event completed).

Proposal: Ambiguity in the context of N or V INTR followed by YI
1. N YI-V ‘N ends.’
2. VINTR YI-V > YI-ASP

=> Loss of *-s: Loss of telicity distinction & loss of N/V distinction

(14) a. Verb: Pulleyblank EMC: *lìōŋ
   liàng lì ér dòng, qí guò xiǎn yǐ
   measure strength CON move, GEN mistake few SFP
   ‘if one measured the strength before moving, one’s mistakes would be few.’
b. Noun: EMC: *lìōŋ
   qí jiù sì liàng, dòu, qū, fū, zhōng.
   Qi old four measure, the dou, the qu, the fu, and the zhong.

YI as an unaccusative verb in Late Archaic Chinese (LAC): NP YI ‘NP ends/finishes’

(15) a. 則身不活、病不已矣。 (Han Fei Zi 46.2.1., 3rd c. BCE)
   zé shēn bù huò, bìng bù yǐ yǐ
   then body NEG live, disease NEG stop SFP
   ‘…then the body does not survive and the illness does not end.’
b. 今義渠之事已，寡人乃得受命。 (Shiji: 79; 2406)
   jīn Yìqú zhì shì yǐ, guǎrén nǎi dé shòu mìng
   now Yiqu GEN affair finish, I then can accept order
   ‘Because the affair of Yiqu is finished now, I can accept the order.

Context permitted ambiguity between verbal and aspectual YI:
=> 飯 fàn ‘eat/meal’ and 會盟 huìméng can be verbal or nominal.
(16) a. 饭已，盡懷其餘肉持去，
   fàn yǐ, jìn huái qí yú ròu chí qù,
   eat finish, completely hold.in.bosom POSS rest meat take leave,
   衣盡汙
   yī jìn wū
dress completely dirty
   ‘After eating/after the meal had finished, they took all their remaining meat with them (in their bosom) and left, and their clothes became completely soiled.’ (Shiji: 126; 3205; from Mei 1999:289)

b. 會盟己，飲，而衛鞅伏甲士
   huì méng yǐ, yǐn, ér Wèi Yāng fù jiā shì
   make.a.covenant YI, drink, CON Wei Yang hide armour officer
   而襲魏公子卬，
   ér xí Wèi gōngzǐ Āng
   CON attack imprison Wei prince Ang
   ‘After they had concluded the covenant, they drank, and Wei Yang hid armoured men in ambush and attacked and imprisoned the prince of Wei, Ang.’ (Shiji: 68; 2233)

Structural ambiguity:
=> YI as V or as secondary predicate signaling end of event

(17) a. [TP fàn [VP yǐ < fàn> ]]
   ‘After the meal had finished, ….’

b. [TP pro [VP fàn [XP yǐ ]]]
   ‘After they finished eating, ….’

Reanalysis: If fàn parsed as N:  YI categorized as V (LAC YI)
If fàn parsed as V:  YI categorized as ASP (EMC reanalysis)

4.2. YI-ASP as Resultative Secondary Predicate

Sybesma (1997, 1999) on Modern Mandarin le 了 as resultative secondary predicate:

(18) a. Ta mai-le ta-de ji-tou zhu.
    he sell-LE he-DE several-CL pig
    ‘He sold those few pigs of his.’ (Sybesma 1999:68)

b. VP (Sybesma 1999:75)
   V YP
   NP Y (end point)

Sybesma (1994):  LIAO-V > LE-ASP as resultative secondary predicate
Grammaticalization of LIAO-V > LE-ASP coincided with rise of VV\textsubscript{RES} (Wang 1980, Mei 1981)

(20) a. Zhangsan qi-lei-le liang pi ma.
Zhangsan ride-tired-ASP two CL horse
‘Zhangsan rode two horses tired.’ (Cheng & Huang 1994: 188)

5\textsuperscript{th} C: Secondary predicate expressing a resultant state; 6\textsuperscript{th} C: Modern Mandarin VV\textsubscript{RES} compounds

(21) a. 今當打汝前兩齒折.
Jīn dāng dǎ rǔ qián liǎng chǐ zhé.
now should hit you front two tooth break
‘Now I should break two of your front teeth.’ (Xianyujing, 5\textsuperscript{th} c.) (Taishō 4, no. 202, p.429a)

b. 主人欲打死之.
Zhǔrén yù dǎ sǐ zhī.
master want hit die 3.OBJ
‘The master wanted to strike him dead.’ (Guang Gujin Wuxingji, Guangji 91)

Widely held that LE-ASP was a replacement for YI-ASP (Mei 1981, 1999; Cao 1986, 1999; Wu 1998).

Point: YI-V > YI-ASP underwent same development to resultative secondary predicate

4.3. Rise of VP-Internal Secondary Predicates

Emergence of VV\textsubscript{RES} resultative compounds as consequence of loss of causative morphology on verbs (Mei 1991)

Here: Causative/unaccusative morphology also expressed aspectual distinctions.

(22) [+/- VOICE] alternation and the verb huài 壞 in Archaic Chinese (Jin Lixin 2006:84):
=> [-VOICE] = transitive and/or imperfective aspect: glur-s
=> [+VOICE] = unaccusative and perfective aspect (resultant state): glur-s

And: Loss of aspectual morphology = loss of causative morphology
=> Rise of VV\textsubscript{RES} can be dated to EMC, coincided with the grammaticalization of YI-ASP.

LAC: Only goal PPs as VP internal end point denoting constituents

Later Han period: V + 得 as aspectual marker signaling completion (Cao 1999)

LAC: Causative/unaccusative verb 定
First Han period: *ding* 定 semantically bleached to mean ‘settle’

(27) a. 荊軻坐定，太子避席頓首曰：

\[
\text{Jīng Kē zuò dìng, tàizǐ bì xì dùn shǒu yùē}
\]

‘When Jing Ke had sat down, the heir got off his mat, knocked his head to the ground and said:’ (Shiji: 86; 2531, 100 BCE)

b. 天光坐定，左右無人，

\[
\text{Tíān Guāng zuò dìng, zuòyòu wú rén,}
\]

‘When Tian Guang had sat down, no one of the entourage was around, and the heir got off his mat and asked:’ (Shiji: 86; 2530)

\[\text{Point: Early Middle Chinese VV sequences in which the second verb indicated that the event had come to successful completion} \]

\[\text{=> First emergence of resultative secondary predicates} \]

\[\text{=> Allows YI-V to be reanalyzed as YI-ASP resultative secondary predicate} \]

\[\text{Summary:} \]

\[\text{Reanalysis: YI-V > YI-ASP (secondary predicate marking end point) in EMC} \]

\[\text{Trigger: Loss of aspectual morphology on telic verbs in LAC/EMC} \]

**5. Extension of Aspectual YI as a Native Development**


1. YI V ‘terminate’ > End point YI-ASP1 (native Chinese development)

\[\text{(occurred with atelic events and supplied an end point to the event)} \]

\[\text{(28) 飲已復吐.} \]

\[
yǐn yǐ fù tǔ
\]

‘He drank, but spit it out again.’ (Fobenxing Jijing, 6th c.) (Taishō 3, no.190, p.777a)
2. YI-ASP2 as calque of Sanskrit gerundive participle:
   (occurred with telic predicates and signaled accomplishment/achievement)

(29) 至 已長跪.
    zhì yǐ cháng guì
    arrive Y1 ruler kneel.down
   ‘After he had arrived, he knelt for a long time.’ (Fobenxing Jijing, 6th c.)
   (Taishō 3, no.190, p.706c)

But: No direct evidence or need for positing different sources of YI-ASP1 and YI-ASP2

Proposal: YI-ASP2 developed directly from YI-ASP1, not as a borrowing.

Early examples:
1. YI-ASP1 with atelic predicate supplying the end point

(30) 供養已，皆白佛言:
     gòngyǎng yǐ, jiē bái fó yán
     sacrifice Y1, all say Buddha say
   ‘when the sacrifices were over, they all said to the Buddha …’ (Daoxing bore jing, 2nd c.)
   (Taishō 8, no.224, p.439b)

2. YI-ASP2 with telic predicate signaling accomplishment or achievement

(31) a. 既受已，復持反遣薩陀波倫菩薩，
     jì shòu yǐ, fù chí fǎn wèi Sàtuóbōlún púsà,
     JI accept Y1, again hold return send Satuobolun bodhisattva,
     即自言:  
     jí zì yán
     then himself say
   ‘After he had accepted them, he held on to them and sent them in return to the Satuobolun bodhisattva and said to himself’ (Daoxing bore jing, 2nd c.)
   (Taishō 8, no.224, p.476a)

b. 佛滅度已，受持經卷.
    fó mièdù yǐ, shòu chí jīngjuàn
    Buddha reach.extinction Y1, receive hold sutra
   ‘After the Buddha reached extinction, we will receive and hold the sutras.’
    (Zheng fahua jing, 3rd c.) (Taishō 9, no.263, p.101a12)

Extension of YI-ASP1 to YI-ASP2:
=> Loss of morphology distinguishing telic from atelic verbs allowed end point
denoting YI-ASP to occur with telic as well as atelic predicates.

Parallel with Modern Mandarin le 了 (Sybesma 1997, 1999):
1. LE1 to express the end point of the event (attaches to atelic predicate)
2. LE2 to communicate that the end point has actually been realized (attaches to telic predicate)

(33) Zhangsan ca-gan-le boli
Zhang San wipe-dry-LE glass
‘Zhang San has wiped the glass dry.’ (Sybesma 1999:69)

(34) VP (Sybesma 1999:75)
  V XP
  YP X (realization)
  NP Y (end point)

Point: YI-ASP1 = Y; YI-ASP2 = X

Extension as further grammaticalization: Movement from Y to X (cf. Roberts and Roussou 2003: grammaticalization as movement up the syntactic tree)

Parallel with adverbs:
=> Early LAC: Aspectual adverbs only occur with atelic predicates to signal completion.
=> Late LAC: Aspectual adverbs OK with achievement verbs to signal reaching of the natural end point implied by the predicate.

(35) a. 既 食，而 後 食之。
    jì shí, ér hòu sì zhī
    ‘After they had eaten, they let him eat.’ (Zuozhuan, Xiang 24.8.3, 5th-4th c. BCE)

b. 季子 曰：堯 固 已 治 天下 矣，
    Jī zǐ yuē Yáo gù yǐ chí zhì tiān xià yì
    ‘Jizi said: “Yao had certainly already regulated the empire.”’ (Lūshì chūngqiu 25.3.2.1, 3rd c. BCE)

6. Summary

Trigger: Loss of aspectual morphology on verbs in Early Middle Chinese
=> Telic and atelic verbs no longer distinguished

Change: Verb YI reanalyzed as an aspectual functional category marking the end point of an event
Environment: Structural ambiguity when YI followed N or V_{INTR} 

\Rightarrow V_{INTR} YI-V > YI-ASP 

(Category ambiguity resulted from loss of morphology.)

Result: YI as a resultative secondary predicate 
(coincided with the emergence of secondary predicates in the language)

Extension: YI-ASP with atelic predicates > YI-ASP with telic & atelic predicates

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