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From topic marker to case marker

A case of case formation in Gansu-Qinghai linguistic area

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The case model of the syncretic case [xa] in the Gansu-Qinghai area came from non-Sinitic languages, while the phonetic form came from Sinitic languages ("Sinitic languages" are usually called "Chinese dialects" in the Chinese linguistic community). The paper shows that this marker [xa] may come from a topic marker and topic chain markers in Sinitic languages. The accusative/dative marker formation was motivated by pragmatic factors. This phenomenon is also found in other languages. The syncretic use of cases is commonplace in languages across the world, whereas the accusative/dative marker [xa] is one of the prominent features in Sinitic languages in the Gansu-Qinghai area. The accusative/dative case formation did not know an even speed in Sinitic languages. It seems that Wutun and Tangwang evolved rapidly while Linxia and Gangou changed with an intermediate rhythm. Qinghai languages are the closest to Tibetic languages, but paradoxically they seem to be more conservative and do not adopt dative markers in possessor and experiencer constructions which are seen overwhelmingly in Tibetic languages. However, other Sinitic languages have adopted this marking progressively and steadily. The language model of the syncretic marker [xa] is not from a single language. Amdo Tibetan as well as Mongolic languages have contributed to the case formation of [xa] in Sinitic languages. This paper proposes that an *Intertwining Model* helped the spread of case formation in this zone. Languages of one group or of one language family have influenced each other at different periods. The results of case formation we note today constitute a net-like relationships connected to various languages, but not a neat and linear path.

Keywords: accusative/dative, topic, syncretic case, non-Han languages

1. Introduction

The Gansu-Qinghai area, which includes the frontier regions between Gansu and Qinghai Provinces, became a linguistic area (Dwyer 1995; Zhong 1997; Slater 2003; Janhunen 2006; Xu 2014; Xu & Peyraube 2018 among others). In addition to local Sinitic languages, a number of non-Han or non-Sinitic languages are spoken in this area. This includes Mongolic languages such as Dongxiang (Santa), Bao'an, and Tu (Mangghuer in Minhe and Mongghul in Huzhu.); Turkic languages such as Salar; and Tibetic languages such as Amdo. Several Sinitic varieties are also found in this area; for instance, the Tangwang language spoken in Gansu (A. Ibrahim[1] 1985; Xu 2014, 2017), and the Wutun (Janhunen et al. 2008) and Gangou (Zhu et al. 1997; Yang 2014) languages in Qinghai. The complex linguistic situation has drawn attention from linguists and geneticists such as Xie & Shan (2002), Shou et al. (2010), Yang et al. (2008), Wen et al. (2013), and Xu & Li (2017) among others. Numerous examples of a lack of correlation between linguistic and genetic data have also been revealed, due to the fact that this area was a (often forced) migration destination from Central Asia to East Asia for several centuries, following Genghis Khan's military victories in Central Asia during the 13th century AD. Language mixtures, and even language replacements, began to occur and have continued to occur without cease.

In this linguistic area, Sinitic languages have undergone drastic changes: the word order has been shifted from SVO to SOV; the plural marker can be applied to almost all nouns whether or not they possess the [+animate] feature; the tone number has been gradually reduced from four to three, to two, and even to zero, according to locations and populations; and one of the most remarkable changes is that the Sinitic languages have begun to use case markers to indicate grammatical relations of different lexical elements. All these mentioned linguistic features seem to be opposite to those of Standard Chinese (or *Putonghua*). Whereas Mongolic languages have an accusative marking alignment, Sinitic languages in the Gansu-Qinghai area, such as Linxia, Tangwang, Xunhua, Xinning, Wutun, and Gangou, have all adopted the same case marking strategy instead of ergative (ERG) marking alignment which is found in Amdo Tibetan. The case system is almost fully-fledged in Sinitic languages which possess nominative (NOM), accusative (ACC), dative (DAT), ablative and comparative (ABL/COMP), and instrumental and comitative (INS/COM) cases.

Case marking in languages can be roughly divided into two main types with broad senses: either those using agent marking, often called ergative marking,

1. The author published his article with the name A. Yibulaheimai. His Chinese name is Chen Yuanlong.

or those with patient marking, which is generally considered as being accusative marking; rare are languages with both markings. This distinctive accusative-ergative marking is referred to by Baerman et al. (2001: 8) as a "marked core case (accusative or ergative)". The languages with the agent case marker, i.e. ergative-marked languages, include Caucasian languages, Indo-Iranian subgroup, Tibeto-Burman languages (Palancar 2009: 563). The languages with the patient marker, i.e. accusative-marked languages, contain both Mongolic and Turkic languages. In the Gansu-Qinghai linguistic area, Sinitic languages and their varieties (Tangwang, Wutun and so on) have begun to resort to the usage of case marking, with all of them having been transformed into accusative-marked language types (such as Linxia, Xunhua, Gangou, Xining and so on). Tibetic, Mongolic, and Turkic languages have been competing and interacting with Sinitic languages for ages. The result of this competition is that the Sinitic languages in the Gansu-Qinghai area adopted the alignment of accusative case marking found in Mongolic and Turkic languages, but did not borrow the type of case marking from Tibetic languages, i.e. ergative marking. Although the Wutun language is deeply influenced by the Amdo Tibetan language, it does not adopt the ergative marking, one of the typical features in Tibetic languages. It is evident that the Wutun language, in case marking, is closer to the Mongolic languages than to Tibetic language. Similarly, the Sinitic languages in Gansu and Qinghai do not mark the subject/agent but mark the object/patient. The ACC marker has the same phonological form as the DAT marker and both are written as [xa] (哈). In fact, there exist many allophones of -xa in spoken language, such as -a, -aa, -e, ɛ, -ə, -ɑ̃, etc. Below are some examples[2] of ACC/DAT in different languages spoken in this linguistic area:

(1) **Linxia** (Wang Sen 1993: 192)

a. ACC:
我 他 哈 叫来 了。
wǒ tā hā jiào lái le
1SG 3SG ACC call-come PRF
'I told him to come.'

b. DAT:
你 东西 哈 我 哈 还给。
nǐ dōngxī hā [ŋa] hā huán-gěi
2 SG thing ACC 1SG+DAT DAT give-back-to
'Give me back my things.'

2. The *pinyin* is added to examples drawn from different Chinese scholars' works. They use sometimes IPA for certain expressions they focus. The pronouns with or without cases in examples are transliterated by IPA when needed.

(2) **Tangwang** (Xu Dan 2014: 191; 261)

a. ACC:
nə tʂhã ʂu xa khɛ̃ tʂɛ
3SG often book ACC read PART
'He often reads books.'

b. DAT:
nə pə̃ ʂu xa ni ake a ki ki liɔ
DEM CL book ACC 2SG whom DAT give to INTER
'To whom did you give that book?'

(3) **Xunhua** (Yin Long 1985: 107 for a; Ma Shujun 1985: 97 for b)

a. ACC:
tɕiɛ ŋa 打 了。
[tɕiɛ ŋɑ] dǎ le
3SG 1SG+ACC beat PRF
'He beat me.'

b. DAT:
我 他 *xa* 给 了 一 本 书。
[ŋə] tā hā gěi le yī běn shū
1SG 3SG DAT give PRF one CL book
'I gave him a book.'

(4) **Xinning** (Ren Bisheng 2004: 339; 341)

a. ACC:
狗 一 个 娃娃 哈 咬 下 了。
gǒu yí gè wáwa hā yǎo hā le
dog one CL child ACC bite RES PRF
'The dog has bitten a child.'

b. DAT:
小王 我 啊 书 还 了。
xiǎováng wǒ a shū huán le
Xiao Wang 1SG DAT book give-back PRF
'Xiao Wang has given me back the book.'

In the above examples, -xa or -a plays the role of an ACC in (a) and of a DAT in (b). As has been mentioned, this syncretism is attested in all local Sinitic languages in the Gansu-Qinghai area. Due to the limits of the paper length, readers are invited to read different case uses (INS/COM, ABL and so on) in Ibrahim (1985), Li KY. (1987), Zhu et al. (1997), Slater (2003), Dede (2007), Janhunen et al. (2008), Xu (2014), Sandman (2016), Peyraube (2017), and Zhou CL (2019), among others. It is well known that in Mongolic languages spoken in this region, such as Dongxiang (Santa), Tu, Bao'an and Eastern Yugur, a syncretism accusative/gene-

tive (ACC/GEN) is used to mark nouns or noun phrases and the phonetic form is -nə or -ni.[3] The question is where the phonetic form of ACC -xa/-a in Sinitic languages came from. If it was borrowed from Mongolic languages, why are these markers – -nə, -ni in Mongolic languages and -xa, -a in Sinitic languages – so different phonetically? Apparently, the Sinitic languages have adopted a *Pattern replication* instead of a *Matter replication* (see these definitions by Matras and Sakel 2007: 829–830); the borrowing item is phonetically different from the source language, but similar to the syntactic frame or construction of the latter.

The origin of the ACC marker -xa in this linguistic area has been discussed for several decades by scholars such as Cheng (1980), Wang & Wu (1981), Ma SJ. (1985), Janhunen (2004), Dede (2007), Janhunen et al. (2008), Yang (2014), Xu (2014, 2015), Sandman (2016), Zhou CL. (2019), and so on. Their conclusions can be summarized as follows: Cheng (1980) believes that -xa is postpositon-like; Wang & Wu (1981) propose that it is a pause marker, a kind of model particle; Janhunen et al. (2008) argue that -xa in Wutun is a "focus marker"; while Dede (2007: 877) thinks that -xa is an "IU [intonation unit] boundary marker," adapted to "marking the anti-ergative." Other scholars such as Du (2005) consider that -xa came from *hang*, a postpositon first seen in the *Secret History of the Mongols*, and has been changed to -xa by phonetic erosion whereas some other scholars like Yang (2014) and Zhou CL. (2019) propose that -xa came from another postposition, homophone -xa,[4] meaning "down, under." Xu (2014, 2015) puts forward the idea that -xa came from a topic marker in Sinitic languages. Sandman (2016: 285) meanwhile considers that the marker -ha[5] in Wutun originated as a topic marker and grammaticalized into a specific object marker, i.e. an "anti-ergative" marker. These points of view can be globally divided in two groups: 1. -xa can be tracked from a historical postposition and they are linked by phonetic similarity; 2. -xa came from a topic particle, motivated by pragmatic factors.

The present paper will follow the second proposition that [xa] in the Gansu-Qinghai area came from a topic element with different allophones, such as -a, -e, ɛ, -ə, -ɑ̃, etc., and is not limited to the standard written form -xa. The Chinese language was and always has been a topic-prominent language (Li & Thompson 1976). In this paper, the first-hand corpus will be complemented by works published by other scholars. We will focus on the origin of the ACC/DAT case marker. After the brief presentation of the target study and background in Introduction,

3. In Eastern Yugur, it is -n, -in, -ə.

4. This postposition is pronounced [ɕia] in Mandarin and [xa] in Northwestern Sinitic languages.

5. The authors of the *Wutun* noted the pronunciation of the accusative marker as [ha]. We take -ha and -xa as variant forms.

Section 2 will present ACC/DAT case formation in other languages with a focus on syncretic features of ACC/DAT found in the Gansu-Qinghai area; Section 3 will deal with the origin of ACC/DAT case marking formation based on both published documents and on data from our own fieldworks, which span several years (from 2007 to 2018); Section 4 will study DAT in possessor and experiencer constructions. In Section 5, concluding remarks about possible model language replication will be given.

2. ACC/DAT in languages and its syncretic feature

The ACC/DAT case marker is treated here in a broad sense; it can be a real case marker in languages with a case marking system (for instance the cases in Mongolic languages) or it can be an object marker in languages without necessary morphology (for instance the preposition *ba* in Mandarin Chinese). We support in this paper that the development of the ACC/DAT case marker in the Sinitic languages spoken in the Gansu-Qinghai area was motived by pragmatic factors. It implies that the grammaticalization of an item which initially was not a case marker is reanalyzed as a grammatical marker. The question is: is the case marker ACC/DAT triggered by pragmatic factors uncommon in languages? The answer is NO. Actually, the origins of case forming in different languages can be approximately grouped into two types. From independent lexical items such as noun, verb, and adverb, through intermediate phases as adposition, to bound morphemes or suffixes. These elements form a continuum chain in the case forming process (Lazard 2001; Heine 2009; Luraghi 2009; Johanson 2009 among others). However, another case forming path exists: case marking can rise from particles or phrases which initially encode a topic or focus in sentences.[6] This point of view is outlined from cross-linguistic data by Lazard (2001), Heine (2009: 466), Iemmolo (2010), and Darlrymple et al. (2011), among others, and from Sinitic languages by Xu (2015: 209). Lazard (2001: 878) explicitly declares that "*La thématicité est un des facteurs les plus importants et les plus fréquents du marquage de l'objet*" (Thematicity is one of the most important and frequent factors in object marking). Iemmolo (2010: 9) agrees with previous scholars citing Pensado (1995: 203) that the DOM [differential object marker][7] "arose from the topicalization of direct and indirect objects." This means that object markers often

6. This clearly excludes agent/subject markers as seen in Japanese and Korean languages.

7. This term is introduced by Bossong (1985) referring to languages where an object in the same context can be marked or unmarked by the accusative suffix.

originate from topic markers in language where the object marking is optional (see also Iemmolo 2010, Montaut 2017, and Chappell & Verstraete 2019, among others). Topicality and focus constructions favor not only the object marking, but also give rise to other core case marking, such as ergative marking in Australian languages (McGregor 1998).

2.1 From topic marker to case marker in other languages

We assume in this paper that the ACC/DAT case marker in Gansu-Qinghai area came from the second model due to pragmatic factors. Contrary to some previous published works, we think that the ACC/DAT marker -xa or -a in Sinitic languages in the Gansu-Qinghai area did not originate from either the adposition [xɑ̃] – meaning "close to, near" – inherited from Chinese in the Yuan Dynasty (1279–1368) (Du 2005), or from the adposition [xa] – meaning "down" – frequently found in Northwestern Sinitic languages (Yixiweisa 2003; Yang 2014; Zhou 2019). We will provide examples and detailed analyses in the next section. The ACC/DAT case marker being provided by topicality is less discussed in literatures about case marking since most studies focus on morphological languages possessing case marking systems; unfortunately, little attention is paid to the rising of case markers due to language contacts.

Topic elements can be developed into object markers and this phenomenon is attested in different languages. The following examples are drawn from Lazard (2001: 875), except for the example in Tucano which is found in Iemmolo's work (2010: 43). In his article, Iemmolo (2010: 32) assumes that "it is indeed topicality that triggers DOM." Iemmolo has provided examples in Romance languages as well as in non-Romance languages, showing that the topicality is closely linked to objects.

a. *râ* in Persian came from a morpheme meaning (hereafter "< ") "for, cause of". Darlrymple et al. (2011: 201) indicate that *râ* expresses in Old Persian "for the sake of, on account of, by, due to, because of';
b. *ma* in Parâči (one of Iranian dialects) < "as for, on behalf of";
c. *ko* in Hindi < "for, as for". Darlrymple et al. (2011: 204) find out that *ko* initially in Sanscrit meant 'armpit' and was later grammaticalized as a spatial postposition. This phenomenon, i.e. a spatial postposition, evolved into ACC and DAT is also attested in other languages, such as the Bai language (Fu and Xu)[8] spoken in southern China;
d. *pe* in Romanian < "through";

8. Fu JQ. and Xu L. (2008).

e. *az* in Shughni (spoken in Tajikistan and Afghanistan) < "next to, with respect to";
f. *z-* in Classical Armenian < "compared with, regarding";
g. *re/de* in Tucano (Amazonian language) < "about, with respect to".

Whatever the way from which an ACC case evolved, whether from lexical items to case markers, or from topic or focus element to case markers, it may reflect the grammaticalization process put forth by Heine (2009: 450). He indicates four steps in grammaticalization of cases: (1) Extension in which novel meaning arises; (2) Desemanticization; (3) Decategorialization and (4) Erosion. These principles are relevant to the first model in which case markers are grounded on morpho-syntax. As for the second model with cases derived from pragmatic source, i.e. the information structure at discourse level, (3) and (4) are attested in our concerned area and (1) and (2) do not seem to be necessary. We argue that the ACC/DAT case came from topic particles in the Gansu-Qinghai area and that the topic markers initially were model particles.[9] Wang and Wu (1981: 51) previously put forth this point of view: "these model particles mark a pause softening the tone and focusing on the object." These particles did not bear a precise meaning as lexical elements, and a subjective interpretation was often implied. The decategorialization happened when the topic function was reanalyzed as a case marker. The "Erosion" step is also attested to in our concerned region, wherein the pronunciation of the ACC/DAT case was merged with pronouns it marked (cf. Examples 1b and 3a).

As has been mentioned in the introduction, the ACC/DAT marker in Gansu-Qinghai has adopted a *Pattern replication* instead of a *Matter replication*, terms used by Matras and Sakel (2007: 829–830) about contact-induced language change. Language contact has been studied by scholars since the 1950's. In pioneering work by Weinreich (1953: 31), the author indicates that it is difficult to copy a bound morpheme but that it is not impossible. In addition to Weinreich's (1953) work, recent years' research reveals that borrowings in language contact can affect all linguistic levels (Thomason and Kaufman 1988) from lexical item to affixes, and from word order to phonological system. It is well known now that a recipient language is able to replicate syntactic patterns from a source language without copying the phonetic form. In the region we are studying, the ACC/DAT marker presents an ideal example. More precisely, the ACC/DAT marker, at the phonetic level, has nothing to share with the marker attested in non-Han (non-Sinitic) languages. However, the pattern indeed came from Mongolic and Turkic

9. These particles may correspond in part to what Dede called (2007: 877) "IU [intonation unit] boundary marker".

languages; the ACC, a core case marker, has been chosen, while the ergative (ERG), another core case marker in Amdo Tibetan, has not. The effort focusing solely on phonetic similarity could mislead the research.

2.2 Syncretism of case marker

Another aspect of the ACC/DAT marker in our zone is its syncretic feature. A case syncretism indicates different case values enclosed in or expressed by a single form. Taking a simple example in English, "her" can be treated as a GEN of third person feminine (her book), as well as a DAT of third person feminine (Give her a book). For third person feminine in English, GEN and DAT constitute a kind of case syncretism being merged. In the Gansu-Qinghai area, the ACC and the DAT markers use exactly the same form -xa,- a, without exception. Thanks to linguists working on cross-linguistic data, we are aware of the fact that case syncretism is a very common feature in case marking. Let us present briefly the schema of syncretism in the Gansu-Qinghai area:

a. DAT/LOC (locative)/ -də. Mongolic languages (Eastern Yugur, Tu, Dongxiang, Bao'an)[10] in the area all share this feature. Amdo Tibetan has also this case syncretism -ra/-la to indicate a location as well as a recipient.
b. ACC/GEN -n, -nə, -ni in Mongolic languages (Eastern Yugur, Tu, Dongxiang, Bao'an). This case syncretism is also found in Yakut and Evenki (Johanson 2009: 501), languages spoken in regions connected to Mongolic languages. However, it seems that this syncretic use is not attested to in Old Monglian, or in other contemporary Mongolic languages.
c. INS/COM. This phenomenon is found in Sinitic languages in this area and it is also very common in languages across in the world.
d. ERG/INS. This case syncretism is only used in Amdo Tibetan in this area. Actually, this is another very frequent use in languages (Creissels 2009: 623, Palancar 2009: 567). Palancar thinks that, "Among syncretic instances, instrument is by far the most common semantic category found in ergative syncretisms." This use is also very frequent in Caucasian and Tibeto-Burman languages.
e. ABL/COMP. The ABL case marker is also used as COMP and this is demonstrated in Mongolic languages and several Sinitic languages. Apparently, some Sinitic languages followed a *Matter replication* since they have adopted a phonetic form similar to Mongolic languages (Tangwang, Gangou), while some others got a *Pattern replication* since their ABL case is completely different from non-Sinitic languages (Linxia, Xunhua).

10. Except the first and second person pronouns in Bao'an and Tu.

f. ACC/DAT -xa, -a. are found in Sinitic languages and some Mongolic languages in this region. This syncretic use is found in almost all Sinitic languages and in Bao'an and Tu.[11] This syncretism is only demonstrated in pronouns (first and second persons) in Bao'an and Tu, but completely absent in Dongxiang and Eastern Yugur. More concretely, ACC marking in Bao'an and Tu have been split into two types, ACC and DAT are syncretic only for first and second person pronouns while ACC and GEN are syncretic when marking nouns and third person pronoun. It seems that this singular use in these two languages is an innovation, since the ACC, split into two syncretic uses, i.e. ACC and DAT vs. ACC and GEN, is uncommon: the syncretic use of ACC/DAT is absent in Old Mongolian and in other contemporary Mongolic languages.

Other combinations also exist in languages across the world such as ablative (ABL)/ERG, ABL/GEN, allative/ACC, DAT/GEN, GEN/ERG, and so on (see Baerman et al. 2001, Creissels 2009, Palancar 2009, Næss 2009, Baerman 2009, Montaut 2017 among others). The aforementioned cases give us an idea of the large spread of these syncretisms in case marking. According to Baerman et al (2001: 2), two-thirds of the languages studied by the authors use this syncretism; subject and object or agent and patients can be identical in taking the same form. In other words, the syncretic use in non-core cases is relatively less frequent. It seems to be very difficult to offer a unified explanation for syncretisms in world languages; case-by-case studies should permit to gain further information.

Our paper focuses on the rise of ACC/DAT in Sinitic languages. It is then interesting to observe this syncretic use in languages outside of this linguistic area and outside of China. Kittilä et al (2009: 558) suggest that the ACC/DAT syncretism ("polysemy" in their term) "is common in languages with DOM" in providing several examples we retake as follows:

Romance languages (cf. preposition *a* in Spanish), Indo-Aryan (cf. the enclitic =*ko* in Hindi), Tibeto-Burman (cf. object suffix =*wa* in Kham), Afro-Asiatic (cf. preposition *lil* in Maltese Arabic), and in some South-Aimerican languages (e.g. =*ta* in Awa Pit).

As for the use *ko* in Hindi, Darlrymple et al., (2011: 204–206) and Montaut (2017) in particular, provide us a comprehensive study. Montaut (2017: 298; 307) indicates that the ACC/DAT case marking started in the 14th century and became systematic after 17th century. According to her, these two case markers appeared around the same period, i.e. the 14th century. The evolution of ACC/DAT in Hindi could be comparable with the syncretic use ACC/DAT in the Gansu-Qinghai area.

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11. This phenomenon is indicated by Todaeva (1957: 34, 38), Buhe & Liu (1982: 33–34), Wu (2003: 336), Slater (2003: 314) in Tu (Mangghuer in Minhe), and Georg (2003: 295) in another variety of Tu (Mongghul in Huzhu).

3. Topic and accusative/dative in the Gansu-Qinghai area

As in the cases of some languages, case marking arose and was formed later in Sinitic languages. Nevertheless, it is difficult to date the forming time even though the time depth is not profound due to multiple factors. Scholars do not possess enough historical documents on language formation and evolution in this zone. Moreover, syntax changes faster than lexicon does in languages (Greenhill et al. 2017). In this case, other disciplines could shed light to our problems. For example, we are aware now, thanks to historical and genetic works, that in fact, Mongolic languages encircling Sinitic languages, such as Dongxiang, Bao'an, and Tu, constitute new Mongolic varieties, and that the core ancestral populations of Dongxiang and Bao'an came from Central and Western Asia. The Tu people also contain a significant portion of forefathers coming from Central and Western Asia (Xu and Wen 2017: 63–66). In the Gansu-Qinghai area, in any non-Han population, an important portion of Han population is present (Xu and Wen 2017: 62–66). Eastern Yugur has a complex history and was shaped around the same period (Lin & Gao 1994).[12] Historians and linguists confirm that the Dongxiang, Bao'an, Tu and Eastern Yugur populations were formed during the 14th and 16th centuries (Zhou WZ. 2004; Lin & Gao 1994; Qie 2009; Xu and Wen 2017).

Case marking has existed since Old Mongolian, but only the syncretic case DAT/LOC [13] is attested (Gronbech & Krueger 1993: 14–15). In our target region, besides DAT/LOC, other syncretic cases such as GEN/ACC, INS/COM are also commonly used in the Dongxiang, Bao'an, Tu, and Eastern Yugur languages. It is important to note that these two syncretic case markers, i.e. GEN/ACC and INS/COM, are different from other Mongolic languages in which GEN and ACC, INS, and COM separately use an independent case marker. Moreover, a singular syncretic use of ACC/DAT for first and second person pronouns in Bao'an and Tu is also alien to other Mongolic languages. The Mongolic languages in this area show peripheral features and innovative characters with respect to other Mongolic languages in case marking. Generally speaking, the simplified paradigm in a system should be formed later than that in one's ancestral language when inherited, or later than that of a source language when borrowed. (Xu 2018: 12).

The Sinitic languages have copied the paradigm pattern mainly from Mongolic languages. They have exploited their own syntactic means to develop

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12. Yugur peoples (Western and Eastern Yugur populations) have two different ancestral sources. Western Yugur came from Turkic ethnic groups inherited from parts of Old Uigur, while Eastern Yugur, Mongolic populations joined Western Yugur to form one entity during around the 14th and 16th centuries.

13. In Old Mongolian, the DAT/LOC syncretic case had two variant forms, i.e. -tur/tür or -a/e.

a new item, i.e. ACC/DAT marker, sourced from a topic marker (TOP). In fact, sometimes it is difficult to distinguish TOP use from ACC/DAT marking since both interpretations are possible and they are not in an exclusive relationship. This double function in syntax allows us to visualize the forming process of ACC/DAT case markers. Three types of examples will be observed in the following Subsections 3.1. The topic interpretation is not only possible but also more convincing. 3.2. -xa or -a can be analyzed either as a topic marker or an accusative/dative marker. 3.3. The topic chain constructions favor the rise of accusative/dative marking. These examples show the close relationship between the topic element and accusative/dative marking, giving a hint about the historical path from topic marker to accusative/dative marker.

3.1 Topic interpretation

Now, let us study sentences where only the topic interpretation is possible. The aboutness is a prominent semantic feature and the verb cannot have object-verb relationships with these topics.

(5) **Xining** (Wang and Wu 1981: 51)
你 哈 坐 说, 他 等 一挂 就 来。
nǐ hā zuò shuō, tā děng yīguà jiù lái
2SG TOP sit say 3SG wait moment then come
'He said: take a seat and he will come soon.'[14]

(6) 家们 哈 不 来 啊, 再 耍 邀。(*Ibid*)
Jiāmen hā bù lái a, zài báo yāo[15]
3PL TOP NEG come PART again NEG invite
'If they won't come, don't invite them anymore.'

(7) **Xunhua** (Dwyer 1995: 153)
tha ^{44} *xa fan mɔ* ^{35} *tɕʅ* ^{44} *ʂaŋ*
he TOP food NEG eat up
'He didn't finish his food.'

(8) **Tangwang (unpublished data)**
kuɪmuə a khətɕĩ jɔ ta li. (Xu & Ran 2019: 249)
dimension (of an event) TOP certainly will great PART
'It is certain that the dimension of the event will be great.'

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14. The verb "say" is always at the end of a sentence following direct speech. This is another linguistic feature in the Gansu-Qinghai area for both Han and non-Han languages.

15. The authors have transcribed 邀 as [tɕ'iɔ].

The above examples are drawn from corpus collected by different scholars in this area and only the topic interpretation is possible. In these sentences, TOP takes just the same phonetic form as ACC/DAT, or more correctly, ACC/DAT uses the exact phonetic form as TOP. These examples permit us to visualize why ACC/DAT can evolve from TOP, since syntactic environments are identical when verbs are transitive; the TOP role is kept or recovered when verbs are intransitive. Due to the reanalysis process, the TOP marker is reinterpreted as an ACC/DAT marker. This shows that intrinsically, the ACC/DAT interpretation is derived from TOP, and the path from TOP to ACC/DAT is then visible.

In contrast to the ACC/DAT syncretic use with the identical phonetic form [xa], demonstrated in almost all Sinitic languages, the comparative markers with different phonetic form found in the Gansu-Qinghai area appear diverse. Sinitic languages have their own marker and some of them use a syncretic one indicating ablative (ABL) and comparative (COMP), just as Mongolic languages do. In comparative constructions reported in Gangou and Xining (Qinghai), the marker [a, xa] can be interpreted as a topic marker. Let us compare some examples.

(9) **Qinghai**[16] (Cheng 1980: 144)
我 嘴 笨, 他 哈, 说 不 过
wǒ zuǐ bèn, tā hā, shuō bu guò
1SG mouth clumsy 3SG TOP speak NEG pass
'I'm not a good speaker, I can't beat him.

(10) **Xining** (Wang Shuangcheng 2009: 242)
傢 的 工资 我 哈 高 哈 着
jiā de gōngzī wǒ hā gāo hā zhe
3SG GEN salary 1SG TOP high RES PART
'His salary is higher than mine.'

(11) **Gangou** (Zhu et al. 1997: 441)
zhi fangzi nai fangzi ha bu dao
DEM house DEM house TOP NEG reach
'This house is not as good as that one.'

(12) **Gangou** (Yang 2014: 232)
娃娃 丫头 哈 不 到 啊。
wáwá yātou hā bù dào a
boy girl TOP NEG reach PART
'The boy is not as good as the girl.'

16. Cheng did not indicate which precise site in Qinghai. The examples cited in this paper will follow these different scholars' terms.

In these examples, *hā* [xa] is glossed by Cheng as postposition (POST), by Wang[17] as comparative marker, by Zhu et al. as accusative marker, and by Yang as dative marker. From my point of view, the intrinsic feature unifying these markers is topic, since it occupies the slot of a typical topic meaning "as for these two items…".[18]

3.2 Double interpretation

(13) **Qinghai** (Cheng 1980)
工作 啊, 不 思谋
gōngzuò a, bù sīmóu
work TOP/ACC NEG think
a. 'As for the work, don't think about it.'
b. 'Don't think about the work.'

(14) **Xining** (Ma 1985: 96)
这 个 事情 哈 你 当时 $a^{22}mu^{22}tʂe$ 没 说?
zhè ge shìqíng hā nǐ dāngshí $a^{22}mu^{22}tʂe$ méi shuō
DEM CL thing TOP/ACC 2SG that-time how NEG speak
a. 'Regarding this matter, why did you say nothing at that time?'
b. 'Why you did not say anything about this matter at that time?"

(15) **Tangwang**
tɕĩniɛ̃ xɔ̃ a jɛ mɛ-tʂhutɕy xa tɕi tuə (Xu & Ran 2019: 249)
this-year apricot TOP/ACC also sell-out RES GEN many
c. 'As for apricots, this year we have sold a lot of them.'
d. 'This year, many apricots were sold out.'

(16) **Tangwang (unpublished data)**
ʂu a mə niɛ̃ xa
book TOP/ACC NEG read RES
a. 'As for the school, he did not know it.'
b. 'He didn't go to school.'

In the above examples, -a or -xa can be interpreted in two ways: either topic marker or accusative marker, since the verbs used in these sentences are transitive in Chinese. The preverbal object occupies the topic slot so that this double inter-

17. Wang SC. (2009) indicates that he writes the marker as [xa], but in most contexts, it is actually pronounced [a] (p242).

18. Liu Danqing proposes (2012: 302) that comparative constructions constitute a sub-group of topic constructions in Sinitic languages.

pretation is possible. As has been mentioned, this kind of topic marking is reanalyzed as accusative marker when oblique case markers (ABL/COMP; INS/COM) began to be used systematically. Some cases have undergone a *Matter replication* (for instance ABL in Tangwang) and others have experienced a *Pattern replication* (for instance INS in Wutun). The whole case system is completed in the Gansu-Qinghai linguistic area with nominative and accusative, which constitute core cases.

3.3 Accusative/dative coming from topic chain constructions

In oral recording, xa or -a often occurs in topic chain sentences. In these kind of sentences, several topic markers co-occur and their phonetic forms vary (Example 17). In other cases, transitive verbs as well as intransitive verbs are used: -xa or -a can be interpreted as accusative marker when verb is transitive, or as topic marker when the verb has an object (Example 18). Let us observe some examples:

(17) **Tangwang (unpublished data)**
limiẽ tɕiəuʂʅ tsɔ ja kəutɕhi a …. jəu li
inside it-is date TOP gogi TOP have PART
'In the tea, there are dates and gogis.'

(18) **Tangwang (unpublished data)**
ʂu a mə niẽ xa ʂʅsẽ suɪ a fãjã tʂə…
book TOP NEG read RES thirteen age TOP graze-sheep CONV
'He did not attend school and at the age of thirteen, he was grazing sheep…'

In (18), it would be difficult to analyze the first -a as accusative marker and the second -a as topic marker. Actually, these two -a constitute a topic chain and the relationship between "book" and "read" (a fixed expression meaning "go to school") favors the shift of topic marker to accusative marker. Topic marker has some varieties in Tangwang such as -a, -xa, -ja, -la, mẽ. Only -xa, -a eventually became accusative marker. Here is another example:

(19) **Gangou** (Yang 2014: 236)
这 个 啊, 范西郎 啊 抓 掉 了 呗
zhè ge a, fànxīláng a zhuā diào le bei
DEM CL TOP, Fanxilang ACC/TOP grasp RES PRF PART
'This one, Fangxilang, people took him away.'

Yang (2014: 236) glosses these two [a] as accusative marker, but it seems that nothing prevents these [a] from being a topic marker, especially the first [a] after "demonstrative+classifier". In sum, when a context is enlarged we have seen

that many accusative and dative markers can also be interpreted as topic marker chains. This phenomenon lets us better understand the process of the case formation in Gansu-Qinghai.

In this linguistic area, the syncretic marker ACC/DAT is demonstrated in Tangwang, Wutun, Linxia, Xiahe, Xunhua, and Xining as Sintitic languages, and in first and second person pronouns in Bao'an and Tu as non-Sinitic languages. Does the DAT marker have the same origin as the ACC in Sinitic languages? The question is complex and merits more discussions.

Phonetically, the ACC/DAT marker in Sinitic languages has the same source, i.e. coming from the Sinitic languages' topic particle. But syntactically, DAT has at least two pathways according to data we possess: the first one, identical to ACC -xa or -a in the mentioned Sinitic languages in this area, may have the same origin as ACC, i.e. a TOP marker reanalyzed as ACC/DAT marker, whereas the second source may originate from possessor and experiencer constructions. Zhou CL. (2019) proposes that these constructions came from Tibetic languages and that the Sinitic languages around have borrowed this structure model.[19] We will discuss this problem in the next section and observe from which language(s) these constructions came from.

The hypothesis that DAT may have the same source as ACC (first source) is supported by sentences found in fieldworks and previous published documents. As has been shown, in the Sinitic languages spoken in the Gansu-Qinghai area, a dative marking can be reanalyzed from a topic marker, and this is more evident when found in topic chain sentences in which object as well as recipient are marked.

Let us consider Examples (20–23) in Tangwang (unpublished data 2016, except Example (21) published in 2019) in which DAT as well as ACC can be considered as a variant form of TOP:

(20) *tʂə ji tɕhiɛ̃ khuɛ pɛjyɛ̃ a tɕiəu jəusufu a tɕiəu*
DEM one thouthand *kuai* money TOP/ACC then Joseph TOP/DAT then
phɛ̃ki liɔ
adjudge PRF
a. 'As for these 1000 kuai, [the court of justice] decided that Joseph must get them.'
b. '[The court of justice] decided that Joseph has to earn these1000 kuai (in this affair).'

19. Zhou CL. (2019: 502–504) proposes that in the Gansu-Qinghai area, the ACC marker is formed later and derived from DAT marker; the latter came from possessor and experiencer in Tibetan languages.

(21) *thãvã a jɛ tɕiãtʂuã a pɛ̃ liɔ* (Xu & Ran 2019: 249)
Tangwang TOP/DAT also certificate TOP/ACC award PRF
a. 'As to Tangwang, it got a certificate of honor.'
b. 'Tangwang was awarded a certificate of honor.'

(22) *phɔ̃təxuɛ a tã tɕi ʂʅ tɕĩvejĩ tɕi jĩtʂã*
Pendehuai TOP/DAT become GEN be security-battalion GEN chief
a. 'As for Pengdehuai, he [the young] became the chief of his security-battalion.'
b. 'He became the chief of the security-battalion for Pengdehuai.'

(23) *ɕyɛfe a na pu tɕhi kuəʐə̃ a* tɕi mə jəu
school fee TOP/ACC give NEG RES oneself TOP/DAT field NEG have
'I could not afford my children's school fee, and I did not have my own fields.'

The topic source seems to be clear in the above sentences, and topic use is a salient feature in Sinitic languages. In the above topic chain constructions, the marker -a can be interpreted as TOP or DAT/ACC. It is possible that -a or -xa in these contexts become a dative marker when it follows a beneficiary. The larger context provides us with more information concerning the case forming process. It is evident that these series of [a] can be interpreted as a topic or case marker. It confirms that topic chain constructions favor the rise of case markers in Sinitic languages.

Today in the Gansu-Qinghai area, accusative/dative marker is generalized. But in 80's even 90's, ACC or DAT was not widespread as nowadays. Let us compare two examples in Xunhua collected by Ma (1985: 97) and Dwyer (1995: 168):

(24) 我 他 哈 给 了 一 本 书。
wǒ tā hā gěi le yī běn shū
1SG 3SG DAT gei PRF one CL book
'I gave him a book.' (Ma Shujun 1985: 97)

(25) *ŋə gei ȵi pan gə*
1SG give 2SG half CL
'I will give you half.' (Dwyer 1995: 168)

It is striking to see that in (24) and (25), the word order of the direct object and verb in these double object constructions is VO instead of OV, as demonstrated today in Sinitic languages. It is worth noting also that the sentence provided by Ma dates from the 80's, i.e. ten years earlier than the date noted by Dwyer. However, dative marker was indicated in Ma's work but not in Dwyer's, i.e. the beneficiary was not marked by DAT in Dwyer's sentence as having been drawn from the same local language. This may reflect the non- homogeneity of case forming among local speakers. The sentence noted by Dwyer is precious since we can

visualize the case forming in the Gansu-Qinghai area. This process must last during more than three decades. The case markers ACC or DAT were formed progressively and with varying speeds (see also Næss 2008) believes that "the motivation of these constant movements [case forming] is that the initial VO word order in Sinitic languages in Northwest China has definitely changed into OV word order". This correlation between word order and case forming is shown in Examples (24) and (25), in which the change was not completed even in the data from the 90's, permitting us to observe an intermediate phase of case forming. The OV word order is predominant today in the Sinitic languages spoken in Gansu-Qinghai, even though the VO order use exists and is especially used by people who have gone to school.

4. Dative marker in possessor and experiencer constructions

Another path by which DAT is formed in the Gansu-Qinghai area came from possessor (POSS) and experiencer (EXP) constructions used in neighboring languages. This means that Sinitic languages have copied the entire construction from other non-Sinitic languages with the same word order of "Subject [POSS/EXP]+DAT+V." This copied frame, or replicated pattern, has been diffused readily in all languages regardless of language families in this area. The DAT marker is found in POSS constructions, with the latter being frequently found in Sinitic languages, including mixed languages, such as Wutun, and mixing languages, such as Tangwang and Gangou. This is one of the syntactic features in the Gansu-Qinghai linguistic area (Xu & Peyraube 2018: 8–10). However, the DAT marker is not always found in EXP constructions in Mongolic languages (cf. Zhou CL. 2019). We will first present languages which use a DAT marker in POSS constructions, then present languages which need a DAT marker in EXP constructions.

4.1 DAT seen in POSS constructions

Some Sinitic languages as well as non-Sinitic languages mark POSS constructions with a DAT marker. Let us observe the following examples:

(26) **Wutun** (Janhunen et al. 2008: 55)
nga ha ma liang ge yek.
1SG- DAT DAT horse two CL have
'I have two horses.'

(27) **Gangou** (Yang 2014: 233)
嗳傢 啊 衣裳 少。
āijiā a yīshang shǎo
3SG DAT clothes few
'He has a few clothes.'

(28) **Tangwang (unpublished data)**
kuəzə̃ a tɕi mə jəu
oneself DAT field NEG have
'I did not have my own fields.'

In the above sentences, the DAT marker is present in these three languages. In actuality, the speed of this construction's spread seems to be uneven. Unfortunately, the formation or adaptation process of the type of constructions is not always clear in Sinitic languages as published papers do not necessarily provide similar sentences. What is evident is that the DAT marker is not used in Mandarin Chinese. For instance, according to published documents, the construction "Subject [POSS] +DAT +V[have]" has been formed during the last decades in Linxia. In other words, the DAT marker was not necessary in this construction several decades ago (see Example (29)). We suppose that the process might be very alike in other Sinitic languages, and the data in Linxia give us a valuable hint. Now, compare sentences in Linxia in which the DAT marker is absent in 1990's data (Example 29), but present in current data (Example 30):

(29) **Linxia** (Lanzhou daxue 1996: 203)
我[20] 再 钱 没 有。
wǒ[ŋə] zài qián méi yǒu
1SG more money NEG have
'I have no money anymore.'

(30) **Linxia** (given by Li Hao from her fieldwork data)
ŋa katɕi mu jou
1SG-DAT little NEG have
'I don't have children.'

It is clear that Wutun, Gangou, and Tangwang are among the pioneer languages which evolve rapidly. Linxia underwent the adjustment later and should be classified in languages with a middle rhythm change. The situation in Qinghai is unequivocal; until today, they have not had this construction of "Subject [POSS]+DAT+V[have]," even though Tibetan and local Sinitic populations in

20. According to the authors of Example (30) (cf. *Linxia fangyan* 1996), the 1SG nominative is [ŋə] in Linxia.

Qinghai have had intense and long-term contact for ages. Let us examine some examples in Qinghai:

(31) **Qinghai**[21] (Wang Zhongqiang 1984: 20)
你 多少 钱 有 俩?
nǐ duōshǎo qián yǒu lia
2SG how-much money have PART
'How much money do you have?'

(32) **Xining** (given by Wang Shuangcheng)
尕汪儿 有 两 个 哥哥 *lia*。
gǎ-wānger[22] yǒu liǎng ge gēge lia
Ga-Wang have two CL old-brother PART
'Ga Wang has two old brothers.'

In (31), the word order is OV while in (32), the word order is VO. Regardless of the order, the DAT marker[23] is absent in both examples. Compared to other Sinitic languages, Qinghai dialects may belong to those which are more conservative and change with a slow speed. This is not only shown by the use of DAT in this construction, but also by the word order which has decidedly evolved into OV order in other Sinitic languages.

In the above sentences, the Wutun and Gangou languages are spoken in Qinghai, and the Tangwang and Linxia languages are used in Gansu. All of them are influenced by non-Sinitic languages such as Amdo Tibetan, Tu, Bao'an, and Dongxiang. It seems reasonable to first check these non-Sinitic languages which have directly influenced the aforementioned four Sinitic languages, and then search indirect impacts from remote languages which were in dominant positions in the past. Let us see some examples:

(33) **Amdo Tibetan** (Robin, preprint: 118)
nga' dpe-cha yod.
1SG-DAT book have
'I have a book.'

21. Wang ZQ. (1984: 16) indicates that his "Qinghai dialects" include Xining, Hualong, Xunhua, Tongren, and Huangyuan.

22. Professor Wang Shuangcheng, a specialist in Qinghai dialects, confirmed that the "er" in (33) has any grammatical meaning, and that it is the rhotic vowel after the family name Wang, as is the case with Mandarin Chinese in Beijing.

23. The DAT marker in Qinghai is [xa] or [a].

(34) **Tu** (Zhaonasitu 1981: 18)
ndaa diuu ŋge ii
1SG-DAT brother one have
'I have a brother.'

(35) **Bao'an** (Buhe & Liu Zhaoxiong 1982: 72)
nadə talɢaŋ wi
1SG-DAT saute-flour have
'I have saute flour.

(36) **Dongxiang** (given by A. Ibrahim)
ka wã tə qua kaji wɛ-nə
Ga Wang DAT two older-brother have-DUR
'Ga Wang has two older brothers.'

These examples in non-Sinitic languages merit explanations. According to the data we possess, the construction "Subject [POSS]+DAT+V [have, obtain]" is overwhelmingly found in Tibetic languages. In different dialects, this construction is found in Lhasa, Dazhasi, and Qiujixiang in Ruoergai, as well as in Tianzhu and Tongren.[24] In Tibetic languages, the verbs used in this construction are not limited to "have" as has been seen in Sinitic languages, but are instead extended to other verbs such as "obtain, find" and so on (Tournadre & Dorje 2003). In other words, the syntactic constraint of using a DAT marker in this kind of construction is much stricter, and the verbs used in this construction are richer in Tibetic languages.

Examples in Tu and Bao'an are revealing since, in these two languages, ACC and DAT are represented under the same phonetic form. As has been discussed earlier in the present paper, this syncretic use is not common in non-Sinitic languages, while it is found in all Sinitic languages in this linguistic area.

The Tangwang populations does not have close contact with Tibetan people, but with Dongxiang people whose language, a variety of Mongolic languages, may influence the Tangwang language. However, the Tangwang language possesses this construction. The Tibetic languages should have more impacts on languages spoken in Qinghai and Sunan (south of Gansu), while Mongolic languages should logically exert more influence on their Sinitic neighbors in Gansu. In fact, Mongolic languages have different ways to express "to have":

24. The data of the Tibetic languages in Ruoergai, Tianzhu, and Tongren were provided by Professor Yin Weibin.

(37) **Khalkha Mongolian** (Tserenpil and Kullmann 2008: 192)
Надад нэг ах, нэг эгч байсан
1SG-DAT one brother one sister have-PAST
'I had one brother and one sister.'

(38) **Khalkha Mongolian** (Tserenpil and Kullmann 2008: 196)
Би нэг ах, нэг эгчтэй байсан
1SG one brother one sister-COM have-PAST
'I had one brother and one sister.'

The Khalkha Mongolian spoken in Mongolia has at least two ways to express "to have." In (37), the DAT marker is used, just like in Tibetic languages, and in (38) the comitative (COM) case is used. The way of expressing possession may vary in Mongolic languages, but at least two models exist: one with DAT and one with COM. Tu, Dongxiang, and Bao'an belong to Mongolic languages, and it is not surprising to find the same expression frame.

The paradox is, if this construction came from Tibetic languages, why have some Qinghai dialects not adopted this construction from Tibetic languages, despite the fact that the local Sinitic languages and Tibetic languages have been in close contact for ages? In contrast, Sinitic languages close to the Tu, Dongxiang, and Bao'an populations, which were shaped during the 14th and 16th centuries (Zhou WZ. 2004; Qie 2009) have gradually adopted this construction. For instance, the Tangwang language might borrow this construction from Dongxiang since Tibetan language had much less influence on Tangwang. The borrowing model has to be studied further and an *Intertwining Model* seems to be favored (Xu forthcoming).

4.2 Dative marker seen in experience constructions

The "experience" (EXP) notion used here takes a commonly accepted definition: experiencer is an argument that undergoes a sensory, cognitive, or emotional experience. It corresponds in part to non-volitional action underwent by a person in Tibetic languages. The verbal categories with EXP do not necessarily overlap from language to language. In many languages, adposition and case markers are often used in order to indicate the weak transitivity of emotional verbs which are linked to object. In the Gansu-Qinghai area, Tibetic languages possess a more developed system which indicate this category of verbs such as "to like", "to be afraid of", "to be angry", "to be surprised" and so on (Tournadre & Dorje 2003: 130). Mongolic languages seem to have a set of verbs less rich, and verbs such as "to like" and "to be afraid" are frequently found in documents. In Tibetic languages, the DAT marker is obligatory for the mentioned verbs, while in Mongolic

languages DAT is used for "to like," and ABL (ablative) is devoted to "to be afraid." Whatever the choice of the case, the status of these verbs is special in languages. In Gansu and Qinghai, Sinitic languages have adopted EXP constructions and the verbs seen in this kind of construction are limited when compared to Tibetic languages. Nevertheless, the spread of this construction is progressive in the Gansu-Qinghai area. Now, examine some constructions with an EXP subject.

(39) **Wutun** (Janhunen et al. 2008: 63)
gu ha e di li
3SG FOC [25] hungry PROGR OBJ [26]
'S/he is hungry.'

(40) **Gangou** (Yang 2014: 233)
阿妈，我 啊 饿 了。
amā, wǒ a è le
mom 1SG DAT hungry PRF
'Mom, I'm hungry.'

(41) **Tangwang** (given by Wang Xiaoshan)
va nuə liɔ
1SG-DAT hungry PRF
'I'm hungry.'

(42) **Linxia** (given by Li Hao from her fieldwork data)
ŋa nuo tʂə li
1SG-DAT hungry PRF PART
'I'm hungry.'

(43) **Amdo Tibetan in Tongren** (given by Yin Weibin)
ŋa hto gə
1SG-DAT hungry MOD
'I'm hungry.'

(44) **Tu** [27] (Slater 2003: 258)
bi zhuangwangla-ji qimei bieqin bao kuer-sa
1SG hope-IMPERF 2SG-DAT illness PROHIB arrive-COND
'I hope you don't get sick.'

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25. The term Focus is quite revealing. It can be interpreted as a Topic. For the sake of unifying the term, we call it DAT.

26. PROGR: progressive; OBJ: objective.

27. Slater cited it from Dpal-ldan-bkra-shis et al., 1996: 57. IMPERF: imperfective aspect; PROHIB: prohibitive; COND: conditional (Slater 2003: xvii).

(45) **Bao'an** (given by Li Hao from her fieldwork data)
natə *ləsi-tɕo*
1SG+DAT hungry IMPERF-OBJ
'I'm hungry.'

(46) **Dongxiang** (Chulu 1994: 16)
ənə *maʁa* *nama-də gau* *ui* *xəŋ* *wo*
DEM morning 1SG-DAT good NEG very AUX
'I was not feeling well this morning.'

In the above examples from genetically unrelated languages, a common syntactic feature is shared:

The EXP is marked by a DAT marker, just as in POSS constructions. It is important to note that the frequency of this construction is not homogenous. In Tibetic languages, including Amdo dialects, the DAT marking is almost systematic in EXP construction covering a large set of verbs, whereas in Mongolic languages, this DAT marker is not always necessary since different syntactic means can express the same meaning. In fact, even in the same group of languages, the marking strategy is not always the same. For example, in Amdo Tibetan sentences collected by Min Shengzhi (1989: 83), such as "I have a horrible headache," the first person pronoun is not marked by DAT or by other cases.

As has been shown earlier, Sinitic languages do not undergo syntactic change with the same rhythm. Example (48 = 40) reflects a result of recent syntactic change. In the data from Gangou provided by Zhu et al. (1997), EXP constructions with a DAT marker are not yet attested:

(47) **Gangou** (Zhu et al. 1997: 438)
aijie zhi *ada* *dai* *ama* *liar nuo* *zhi…*
3SG GEN father and mother two hungry CONV
'[saw that] their father and mother were very hungry…'

(48) **Gangou** (Yang 2014: 233)
阿妈, 我 啊 饿 了。
amā, wǒ a è le
mom 1SG DAT hungry PRF
'Mom, I'm hungry.'

Comparing Examples (47) and (48), both present exactly the same syntactic and semantic context in the Gangou language, and one can see that in over less than two decades, the EXP construction has changed. The DAT marker was not needed in the examples in 1997's data, i.e. the marking is absent after "both father and mother" (Example 47). But now, EXP has to be marked by a DAT marker (48). This phenomenon is parallel to POSS construction in Linxia, in which DAT was not

demonstrated in 1990s'data (Example 29), whereas today, DAT has become standard (Example 30). Remember that in Gangou as well as in Linxia, the syncretic marker ACC/DAT with the same phonetic form [xa] was already commonplace at the time where DAT was not used in POSS and EXP constructions. The later rise of DAT in POSS and EXP constructions suggests that this DAT marker has been formed through a different path than the first one. More concretely, the formation process of DAT in POSS and EXP constructions must be independent from that of the syncretic marker ACC/DAT, which was formed earlier due to TOP and TOP chains in Sinitic languages. The syncretic markers ACC/DAT and DAT in POSS and EXP constructions are both relevant to *Pattern replication;* the first one was limited to one case replication while the second has copied the whole construction.

5. Concluding remarks: From which language did the Pattern replication spread?

It is important to understand how the *Pattern replication* has worked for ACC/DAT and DAT in POSS and EXP constructions. Which language has served as the model of ACC and DAT in Sinitic languages? I think that the source language is not a single language. Tibetic languages (especially Amdo Tibetan) and Mongolic languages[28] must have exerted influences in this linguistic area. The historical layers of different languages have been attested to. The Tibtetans (吐蕃*Tǔbō* in Chinese) headed by the 唃厮啰 *Gūsīluō* (rgyal sras) family ruled this region around the 8th century （Qi 2011), and later the Mongolians ruled by Genghis Khan governed this area in the 13th century. The Dongxiang, Tu, Bao'an, and Salar (a Turkic language) were formed during the 14th and 16th centuries (Zhou WZ. 2004; Qie 2009 among others). The dating of these non-Sinitic populations' formation is essential in permitting us to find out a probable scenario of language contact. Geographical context also plays a significant role. For example, the Dongxiang people have been less influenced from Tibetans languages since their inhabited region is the farthest from Tibetan zone, while the Bao'an language spoken in Qinghai[29] is strongly influenced by Tibetic languages. These different facts do not imply that linguistic change are necessarily regular. One language evolves and changes, and it can self-adjust *many times*. The Gansu-Qinghai region is inhabited not only by local people but also by immigrants of many generations and during many generations including the Han people. This has never stopped and intermarriages between

28. Turkic languages have also influenced this zone with fewer traces.

29. The Bao'an language situated in Gansu underwent much less influence from Tibetic languages (see Chen NX 1990a, 1990b).

different ethnic populations have lasted for several ages. In this historical, anthropological, and linguistic context, it is difficult to assume that a single language or languages of a single language family have provided such replication models.

I propose here an *Intertwining Model* in this linguistic area. This means that replication models do not come from a mono-language but from multiple languages (including dialects of one language). This also suggests that the influences were not unidirectional, but multidirectional. The striking example is the Wutun language spoken in Qinghai. Scholars remark that this language became a mixed language (Yixiweisa 2004; Xu 2017, 2018), and that the vocabulary is mainly Chinese while the syntax is strongly colored by Amdo Tibetan languages. Xu (2017: 140) put forth that syntactic borrowing more significantly impacts a language than lexical borrowing does. In actuality, the Wutun language presents an ideal *Intertwining Model* in language contact. It is known that Amdo Tibetan has intensely influenced the Wutun language, but regarding the core case marking, Wutun has adopted the core case marking system from Mongolic languages, i.e. ACC marking instead of ERG marking. The latter is overwhelmingly found in Tibetic languages.

As for DAT in POSS and EXP constructions, we have seen in the last sections that Tibetic languages as well as Mongolic languages both use DAT markers in POSS construction. Tangwang in Gansu and Gangou in Qinghai copied this construction earlier than Linxia and Qinghai. The Linxia language today has also begun to use this construction. However, Qinghai dialects, which are historically and geographically the closest to Tibetic languages, have not adopted this construction yet, while the ACC marker is commonplace in Qinghai. Thus, it is difficult to believe that in Sinitic languages the DAT marker was first borrowed from Tibetic languages, and then extended into ACC marking as Zhou CL. proposes (2019).

The parallel scenario has happened with EXP construction. It exists in Tibetic languages, as well as in Mongolic languages. In the former, the DAT use is systematic with a large set of verbs, while in the latter, the choice of verbs is rather narrower. As has been shown, Gangou has just recently adopted this construction, while two decades ago it was not the case.

The replication of this model construction was not, and is still not, homogeneous from language to language. Additionally, between the source languages, i.e. Tibetic and Mongolic languages, there was a reciprocal influence on each other in a more profound time depth.

Due to the aforementioned elements, I tend to say that non-Sinitic languages have contributed in varying degrees to the formation of case marking in Sinitic languages, and that Sinitic as well as non-Sinitic languages have driven together these innovations in this linguistic area.

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Abbreviations

ABL	ablative
ACC	accusative
CL	classifier
COM	comutative
COMP	comparative
DEM	demonstrative
DUR	durative
EXP	experiencer
GEN	genetive
INST	instrumental
NEG	negative
O	object
PART	particle
PL	plural
POSS	possessor
POST	postposition
PRF	perfect
PROGR	progressive
RES	resultative
S	subject
SG	singular
TOP	topic
V	verb

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