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Author(s): Dan Devitt

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THE DIACHRONIC DEVELOPMENT OF SEMANTICS IN COPULAS

Dan Devitt

State University of New York at Buffalo

A well-known and much-discussed feature of Spanish is the use of two separate verbs- *ser* and *estar* - which are glossed as equivalents to the English 'to be'.¹ Reference grammars of Spanish traditionally describe the distinction between *ser* and *estar* in terms of a semantic difference that is implied in their use. *Ser* is used to imply a relatively permanent condition or state; *estar*, on the other hand, is used to imply that the condition or state predicated of the subject is temporary, as shown in Example 1.

- (1) a. Juan es enfermo 'Juan is sick.' (implying Juan is sickly, an invalid)
 b. Juan esta enfermo 'Juan is sick.' (implying Juan is sick right now, but will recover eventually)

Turkish, like many languages, does not generally use a copula for present tense expressions of equivalence. A simple juxtaposition of subject and complement is the more frequent form of the expression, especially in the spoken language. In writing and formal speech, however, the copula may be included optionally. With third person subjects, the copula is the enclitic form-*-dir*, which adds an epistemic modal flavor of probability to the sentence, as can be seen in Example 2.

- (2) Ahmet iyi-dir 'Ahmet must be well; surely Ahmet is well.'

An interesting etymological parallel can be noted here: both Spanish *estar* and Turkish *-dir* can be traced back historically in their respective languages to verbs meaning 'to stand'.

The question that this paper addresses is whether this fact is nothing more than a coincidence, or an indication of some deeper parallel between the two. The claim put forward here will be that these two senses of the copula (i.e., the 'temporary' sense observed in connection with the Spanish copula *estar* and the 'presupposition' meaning that characterizes the use of the Turkish enclitic *-dir*) are not simply isolated uses of copulas in two unrelated languages. The position that I adopt is that these two uses can be related as different stages on the same evolutionary path of semantic development, illustrated in the figure below.

Figure 1: A Proposed Path of Semantic Evolution in Copulas

This view is supported using data from an informal cross-linguistic pilot study on copular construction. Evidence will be put forward to argue for the view that the 'temporary' meaning is an earlier stage of semantic development which leads into the epistemic or 'presuppositional' reading, and that this path is unidirectional. First, evidence is presented to show that postural and locative verbs are commonly involved in copular expressions. Next, the semantic notion of temporariness is discussed in relation to copulas, and the special affinity between locative expressions and temporariness is considered. Finally, arguments are offered for the hypothesis that the evolutionary path which is posited here is unidirectional.

The first claim that needs to be supported is that copulas do often find their source in verbs of posture or location. The pilot study, which looked at copular constructions in a convenience sample of languages, has revealed several other examples of copulas with connections to verbs of posture, in addition to the Spanish and Turkish cases already mentioned. Portuguese has a set of copulas that are identical to those found in Spanish. Irish and Scots Gaelic, Indo-European cousins of Spanish, also have a locative verb -- *ta* in Irish, *tha* in Scots Gaelic -- that is derived from the Proto-Indo-European root **sta-*, 'to stand'. This verb fits into a contrastive set with the copula *is* and yields 'temporary/permanent' minimal pairs similar to those found in Spanish. The verb that is used for nominal predicates in Mangarayi is *ni*. The form is glossed 'to sit, be, exist', and it is noted that, although this form can be used as a general verb of location for most referents, it retains its original sense of 'to sit' to an extent that prohibits its use with nouns whose vertical extension is a more salient feature.

The languages just mentioned are cases in which a documented link to postural verbs was found in reference materials. The field of languages to be considered with regard to the locative-based historical sources for copulas is increased greatly when verbs of a more general locative meaning are included. In Sranan, for example, the copula *de* was reportedly a locative verb at an earlier stage of the language (cf. Favery, Johns and Wouk 1976). Example 3 shows that this copula is contrasted with another form, *na*, and that the distinction between the two is one that falls along the same lines as that expressed by Spanish *estar* and *ser*, with Sranan *de* expressing the temporary sense and *na* expressing an equation.

3. SRANAN

- a. Mi de botoman. "I am a boatman (expresses the speaker's current occupation).
- b. Mi na botoman. "I am a boatman (expresses the speaker's qualifications or professional capabilities.)

English provides another example. The suppletive past tense form of the English copula also derives from a locative Proto-Indo-European stem, **was-*, meaning 'to dwell, to stay'. Another PIE root **men-* 'to remain' may be the source for the pair of copulas found in Balochi: *ynt*, used for singular definite subjects, and *ent*, used for plural subjects.

In addition to these examples, the copulas in several of the Chadic languages might also belong with this group. Frajzyngier 1986 presents a case for considering the copula *a* as being derived from a preposition in the proto-language. The form that is used in Mopun as an equative copula occurs in Bolewa as a locative copula, and in Fyer as both a locative and equative copula; thus, there is some strong motivation for considering it to have a locative source. However, given the persistent problems of classification that have been associated with the category of 'verbids' in African languages (cf. Lord 1973), where these elements display some behaviors that are verb-like and others that are like prepositions, an argument might be made for locative verbs as a historical source for them.

Language	Form of the Copula	Source
Spanish / Portuguese	estar	< L. stare 'to stand'
Irish / Scots Gaelic	ta / tha	< PIE *sta- 'to stand'
Mangarayi	ni 'to be'	< ni 'to sit'
Sranan	de	< general locative (< ? 'there')
English	was	< PIE *vas- 'to dwell, to stay'
Balochi	ynt ent	< ?PIE *men- 'to remain'
Chadic	a	< Proto-West Chadic a 'in, at'

Figure 2: Languages with Postural / Locative Sources for Copulas

Further evidence for copulas having a locative source might be taken from the synchronic situation that can be noted in many languages. It is not uncommon to find that there is a 'be'-like verb that is restricted to use with locative predicates. Such is the case in Mandarin, in which the particle *zai* can only be used with a locative complement. This form is distinct from the copula *shi*, which is used with nominal predicates. Korean, Lhasa Tibetan, and Igbo also have verbs which not only function as general locatives, but serve as existential verbs as well.

Mandarin	shǐ (copula)	Zhāng sān shǐ yī ge hùshǐ Zhangsan be one CL nurse 'Zhangsan is a nurse.'
	zài (locative particle)	Lǐsǐ zài hǎi-biān Lisi at ocean-side 'Lisi is at the oceanside'
	yǒu (existential verb)	chéng lì yǒu gōngyuán city -in exist park 'There is a park in the city.'
Korean	i-ta (copula)	Insu-nun haksaeŋ i-ta. Insu-TOP student be 'Insu is a student'
	iss-ta (locative/existential)	Insu-nun hakkyo-ey iss-ta. Insu-TOP school-in be 'Insu is at school.'

Lhasa Tibetan	reè (copula)	chā ti tshāpo reè tea this hot be 'This tea is hot.'
	tuù (locative/existential)	thēp tee tuù book here be 'The book is here.'
Igbo	bu (copula - identification)	ó bù ókú 3s be fire 'It is fire.'
	di (copula - description)	ó dī ókú 3s be fire 'It is fire-like; it's hot.'
	wa ...ni (locative/existential)	ó wà n'ibè 3s be there 'S/He is there.'
	na (locative, with human subjects; also glossed 'to sit')	ó wà 3s be 'S/He exists; s/he is around.'
		ó nò nà Kánù 3s be at Kanu 'S/He is in Kano.'

Figure 3: Languages with distinct location copulas

With regard to those languages which use the same verb for location and existence, we note that Munro 1977 traces the copula in Pima, the verb-final particle *-k*, back to the existential verb **ka*.² It is not a new observation that there is a certain degree of relatedness between the semantics of location and existence. Given the frequent identity in expressions for location and existence, it seems quite possible to view existence as a locative expression that is not specified for location, i.e. 'be located in the universe'. One might hypothesize that these cases of corresponding expressions for location and existence are, in some sense, a semantic bleaching, or perhaps more precisely a 'de-syntacticization', in that the existential expression develops out of a loss of the requirement for a locative complement³.

An alternative scenario for development in these locational verbs might be that non-locative complements 'surrender to' the syntactic requirement for a locative complement that is imposed by the locational verb and mark the complement as a location. In the pilot study some languages were found that do follow such a strategy. Tamil requires that nominal and adjectival predicates in copular constructions be suffixed with the adverbial marker *-aa* when the copula *iru-* is used. Locative predicates do not require this marker, but use a locative marker in the same position. Hixkaryana similarly uses a 'denominalizer' postposition *me* with predicate noun complements of the copula. This postposition is also used as an adverbial clause marker. These facts seem parallel to the situation in the Celtic languages with the verb *ta/tha*, where a predicate noun phrase must be made locational by the use of a postposition.

Tamil	<p>NON-LOCATIVE:</p> <p>A. atu nall -aa irukkutu that good-ADVL be-pres-3s:neuter 'That is good.'</p> <p>B. avaru distrikt inspektor - aa iruntaaru he district inspector-ADVL be-pres-3s:hon 'He was a district inspector.'</p> <p>LOCATIVE</p> <p>raaman toottatti- le (irukkaraan)⁴ Raman garden-LOC be-pres-3s:masc 'Raman is in the garden.'</p>
Hixkaryana	<p>NON-LOCATIVE</p> <p>rowti me naha mosoni my brother DNML he-is this-one 'This is my brother.'</p> <p>LOCATIVE</p> <p>xamata ymo mkawo nehakoni saraho rocky-island aug. on-top-of it- was manioc 'The manioc was on top of the rocky island.'</p>

Figure 4: Languages with complements as adverbials/locatives

It does seem that there is compelling evidence for viewing locative and postural elements as potential sources for copulas. The question that arises once this point has been reached is whether there is legitimate evidence for suggesting that locative elements undergo a process of semantic bleaching that leads to their use as general copula-like forms. Some evidence toward an answer can be derived from the comparison of the use of copulas *estar* and *ser* in Spanish and Portuguese. Descriptions of both languages note the 'temporary' versus 'permanent' distinction for the use of the copulas. This semantic function appears to be most easily applied to adjectival predicates. The two languages differ, however, in their treatment of locative complements. In Spanish, only *estar* is regularly used with locative complements. In contrast, Portuguese allows both *ser* and *estar* to be used with locative complements, and furthermore, the 'temporary/permanent' distinction that is part of their use with adjectives is carried over into their use with locational predicates.

4. a. SPANISH

- i. Segovia esta en Espana
- ii. No esta en casa.

"Segovia is in Spain."
"He's not at home."

b. PORTUGUESE

- i. A casa e no Flamengo
- ii. Joao esta em casa.

"The house is in Flamengo."
"Joao is in the house."

These facts provide some insight into the alternatives that might develop out of a single system. In both the Spanish and the Portuguese cases, the form *estar* has developed a sense of temporariness. This point is readily understood from the semantic distinctions that result from the choice of either *ser* or *estar* with an adjectival predicates. While adjectives as a class lend themselves to an interpretation in which the relative temporariness or permanence is important, just the opposite is true of nouns. If we consider nouns to be a semantic class that refers to stable and unchanging states or conditions, the inherent permanence of nouns is reflected by the fact that, in both Spanish

and Portuguese, only *ser* is used with predicate nouns. The difference between Spanish and Portuguese is the degree to which each has allowed the temporary sense of the copula *estar* to extend into the predication of location. Spanish *estar* seems to have retained a strong sense of location which requires that it be used with locative predicates. Portuguese *estar*, on the other hand, appears to have shifted its semantic sense so that its primary meaning component is more strongly a sense of temporariness (perhaps in contrast with the permanence implied by *ser*) which is carried over into locative predicates. Spanish may be moving to a similar stage. Butt and Benjamin 1989 relate that *estar* in Spanish is still the primary form for locative expressions; however, they also note that there is a tendency in the colloquial language to use *ser* with nouns that denote relatively more permanent features or fixtures.

There is some evidence that the locative copula in Korean *iss-ta* also has some connection to a meaning of 'temporary state'. The sentence in (5) below contains both the general locative verb and the copula *i-ta*.⁵

5. KOREAN

ku-nun uysa -i - ciman cikum-un sensayng-ulo iss-ta
3s-TOP doctor-COP-but now -TOP teacher -as be -IND

One possible reading for this sentence is, 'He is a doctor (by training), but right now he is (working as) a teacher.' Here again, the locative verb participates in the expression of a temporary state.

Another source for copular morphemes that has been discovered is deictic particles and personal pronouns (cf. Li and Thompson 1977). A trend that can be noted among the semantic distinctions that copulas express is that the 'temporary/permanent' semantic distinction is frequently noted in those cases where the copula is derived from a locative source, but copulas that are traced to deictic origins are more often noted to signal an identification relation rather than notions of temporariness. Modern Hebrew is an example of a language that has copular forms that come from the third person pronouns. In Modern Hebrew, those clauses in which the copula is present are identificational; those that have no copula are predicational or descriptive (cf. Rapoport 1985). Perhaps a clearer illustration comes from Mandarin. According to Li and Thompson 1981, *you* predicates the existence of some noun at some location, while *shi* is used to characterize or identify the predicate noun. The distinction is demonstrated in the following examples.

6. MANDARIN

a.	qiánmián	yǒu	yī -ge	huāyuán	'In front there is a garden.'
	in front	exist	one -CL	garden	
b.	qiánmián	shì	yī -ge	huāyuán	'What's in front is a garden.'
	in front	be	one -CL	garden	
c.	lǐmián	yǒu	shénme?		'What is inside?'
	inside	exist	what		
d.	lǐmián	shì	shénme?		'What is it that is inside?'
	inside	be	what		

(6a) conveys information about the location of the garden; (6b) actually equates 'front' and 'garden'. This sentence would be used to indicate that either the only thing that is in front is the garden or that the addressee knows that something is in the front and merely needs to have it identified. This same distinction comes through in the possible answers to the questions (6c) and (6d). The question in (6c) could be answered with a phrase that means 'nothing'; however, such an answer would not be appropriate for question (6d). The explanation for this limitation is that *shi* presumes that some entity must be inside. The information that is required is what exactly that entity is.

The observation that these two sources tend to have particular usages associated with them has led to a hypothesis that those copulas found to convey a sense of temporariness are more likely to have their source with some locative element, and those that have a rigid identificational use are likely to have come from deictic sources. The basis for this hypothesis partially rests on the notion that the semantics of the source plays a deterministic role in the evolution of the grammatical item. In this case, the explanation is that location is not an inherent feature of a thing, i.e. an entity can be moved, re-located, and not have its identity changed at all. In contrast, deictic elements which can be used anaphorically to refer to some entity are functionally suited to the expression of identity. Their presence in an utterance is logically dependent on the fact that they have identical reference to some other entity in the utterance.⁶

Source	Characteristics	Examples
POSTURAL/ LOCATIVE VERB	<ul style="list-style-type: none"> - expression of temporary state - show a relatively full range of verb-like behavior - may be used as an auxiliary in complex or periphrastic verb constructions 	Spanish (<i>estar</i>) English (<i>be</i>) Irish (<i>ta</i>) Korean (<i>iss-ta</i>) Igbo (<i>ino</i>)
DEICTIC PARTICLE or PRONOUN	<ul style="list-style-type: none"> - expression of identity - usually defective in the grammatical categories associated with verbs 	Mandarin (<i>shi</i>) Modern Hebrew (<i>hu/hi</i>) Sranan (<i>na < da "this"</i>)

Figure 5: Two sources for copulas and their general characteristics

In the course of doing the pilot study, two basic patterns were noted with respect to the expression of temporariness in copulas. One typical system is exemplified by the system in Spanish. There are two verbs, one of which denotes a temporary condition while the other denotes a permanent state. This kind of dual system also occurs in Irish, Scots Gaelic, and Sranan. Old English also maintained a similar distinction using two separate verbs 'to be'. *Beo-* was used to express habitual occurrences, while *wes-* expressed identity or eternal truth.

Traugott 1972 links this last historical fact to the invariant *be* of Black street speech. Although the use of invariant *be* is not fully understood, a number of researchers (Fasold 1969; Rickford 1974, Baugh 1983) have noted that it frequently appears with adverbial indicators of distributive habitual activity, but less frequently with non-habitual phrases, and never in cases of identity. In these latter two aspects a zero-form copula is generally used. This exemplifies the second pattern that can be found for the marking of temporariness. In these cases there is a single copula, and its optional appearance is a signal of the relative temporal limitations of the predication. Another example of a language that employs this strategy is Kobon. In present perfect tense the copula is generally absent unless the speaker regards the feature as being of a temporary nature. In that case, the copula may be overt.

7. KOBON

- a. Nipe Kaunsol (m+d - öp) 'He is the councillor.'
 3s councillor be - perf3s
- b. Nipe b+ majo (*m+d - öp) 'He is a mature man.'
 3s man mature be - perf3s

It is also worth noting that the Kobon copula *m+d* is identical to the marker of habitual aspect. Another example of a language that makes a temporal distinction based on the use

or non-use of the copula is Turkish. The copula *-dir* is used in statements that have general validity. The same statement without the copula refers to the current moment.

8. TURKISH

- a. Atlar tembel-dir ‘Horses are lazy (a general statement of fact).’
- b. Atlar tembel ‘The horses are lazy (at the moment)’

The two methods of ‘temporary/permanent’ distinction are summarized in Figure 6 below.

Language	Form	Example	
SPANISH	estar	Juan esta enfermo ‘Juan is sick.’	2 F O R M S
	ser	Juan es enfermo ‘Juan is sickly.’	
IRISH	ta	ta an páipéar ban ‘The paper is white.’ (i.e. blank; not written on)	
	is	is bán an páipéar e ‘The paper is white.’ (i.e. its whiteness is inherent)	
SRANAN	de	Mi de botoman ‘I am a boatman.’ (refers to the speaker’s current occupation)	
	na	Mi na botoman ‘I am a boatman.’ (by training)	
OLD ENGLISH	beo-	...þonne þær bið man dead... ‘...whenever there is a dead man’	1 F O R M
	wes-	..of Danai þære ie, seo is irnende of norþðaele... ‘from Danai that river which is running (=which runs) from northern part’	
BLACK ENGLISH	be	Sharon be neat eriday	
	Ø	They in the club. (at that time)	
KOBON	m+d	Nipe Kaunsol m+d-öp ‘He is the councillor.’ (for the time being)	
	Ø	Nipe Kaunsol ‘He is the councillor.’ (no time restriction implied)	
TURKISH	-dir	Atlar tembeldir ‘Horses are lazy.’ (generally)	
	Ø	Atlar tembel ‘The horses are lazy.’ (right now)	

Figure 6: Expression of ‘temporary’/ ‘permanent’ distinction

To summarize the observations that have been made so far, there is good evidence that the source for the copula morpheme, in at least some languages, can be found in locative or postural verbs. I’ve provided evidence from historical reconstructions. I’ve also tried to support this claim by providing evidence from synchronic grammars that shows some degree of connection between copulas and expressions of location. Finally, I’ve attempted to show that cross-linguistic observations demonstrate a particular affinity between the expression of temporariness and the notion of location, and to provide some reason why that affinity may exist.

Let me now return to the observations that began this presentation. In the introduction to this presentation , I suggested that it is possible to relate the temporary sense that is expressed in Spanish *estar* and the presuppositional sense that is expressed in

Turkish *-dir*. The notion of a 'path' that I am invoking here is a particular instance of the general process of 'grammaticization' that is outlined in Bybee 1985. The term 'grammaticization' refers to the development of grammatical morphemes from full lexical items through parallel and gradual processes of phonological erosion and semantic generalization. The process is constrained by mediating principles that Bybee labels 'relevance' and 'generality'. Of particular interest for the considerations at hand is the principle of generality, which maintains that the sources for grammatical morphemes must be sufficiently general in their semantic content to allow them to be combined appropriately and legitimately with a wide range of elements. This factor, however, must be counter-balanced with a general necessity that describes the communicative intent that characterizes any utterance. That is, any lexical item that is to serve as a source must have enough semantic content to make it useful in an utterance. It must contribute something to the meaning of the utterance in order to assure that it is used frequently, which in turn will lead to further phonological and semantic reduction, all of which ultimately leads to its development as a gram. The effect of this principle of generality is to limit the stock of potential sources for grammatical markers.

Grammaticization research also suggests that the semantics of the lexical source plays a deterministic role in the nature of the gram that ultimately develops out of the source. Bybee and Pagliuca 1987, for instance, gives evidence for six specific semantic sources for future tense morphemes. Heine and Reh 1984 presents material that also demonstrates the regular occurrence of some specific lexical sources and associated endpoints for grammatical markers in African languages. The strongest stance on this issue would be to suggest that the original semantics of the lexical source may not be lost entirely in the process of bleaching that accompanies grammaticization. The semantics of the source is recoverable to a certain extent, and that recoverability comes through in restrictions and apparent anomalies in the synchronic behavior seen in some grams.⁷

The principle of generality determines that only a small number of lexical items are potentially available to undergo grammaticization. The idea of a kind of semantic determinism operating in the process of grammaticization suggests that the members of this limited set are put on a particular path by their original semantics. Taken together, these principles provide a more compelling background for considering the etymological parallel that exists between the Spanish and Turkish copulas. The fact that these two morphemes share a source, as well as a grammatical function, provides strong motivation for relating them both to a single evolutionary path of semantic development. The final question that needs to be addressed is how the meaning of 'temporary state' and 'presupposition' might be related. I suggest that it is possible to see presupposition as an extension in the scope of 'temporary state'. That is, the notion of 'temporariness' is not simply applied to the action of the predicate, but is extended over the entire assertion. In the final stage of its evolution, the Turkish copula takes the entire clause within its scope, and rather than asserting that the state which is predicated of the subject holds temporarily, it presents the nature of the assertion itself as temporary. The proposed stages of development are schematized in Figure 7.

STAGE I. The children stand in the garden.

STAGE II. The children $\left[\begin{array}{c} \text{are in the garden.} \\ \text{GENERAL} \\ \text{LOCATION} \end{array} \right]$

STAGE III. The children $\left[\begin{array}{c} \text{are in the garden.} \\ \text{TEMPORARY} \\ \text{LOCATION} \end{array} \right]$

STAGE IV. [The children are in the garden.
TEMPORARY
ASSERTION]

(...i.e., 'I temporarily assert, until presented with evidence to the contrary, that the children are in the garden.')

Figure 7: Proposed stages on the path of semantic development in the Turkish copula

An iconic measure for this view of the situation is provided by the example in (9).

9. TURKISH

a. bahçede	'in the garden'
b. bahçedeler	'They are in the garden.'
c. bahçededirler	'They are in the garden (EMPHATIC) or 'They are surely in the garden.' (PRESUPPOSITION)
d. bahçedelerdir	'They are surely in the garden.' (PRESUPPOSITION)

Note that (9c) and (9d) contain all of the same morphemic elements, differing only in the ordering of the plural marker *-ler* and the copula *-dir*. These two elements can shift positions; however, the utterance is unambiguous only when the enclitic *-dir* is in the final position. It seems that only when filling this final slot, taking the rest of the proposition within its domain, can the copula clearly function in its epistemic sense.

Another indication of the stage to which the Turkish copula has evolved may be taken from the fact that it is now freely affixed to verbal forms to indicate the speaker's presumption of the truth of the statement. In other words, it is not simply used to equate or identify a third-person subject with a complement, nor to add emphasis or a sense of supposition to such statements, but also to add an epistemic sense to any utterance. The examples given in (10) below show that the copula is no longer restricted to use with third person subjects. It can now be used with all forms of the verb, no matter what the person/number marking is, and its function in this use is to add an epistemic modal flavor to the meaning of the utterance.

10. a. şair-im	'I am a poet.'
b. şair-im-dir	'I am surely a poet; I think that I must be a poet.'
c. biliyor-sunuz	'You all know.'
d. biliyor-sunuz-dur	'You all surely know; I presume that you all know.'

The final point which requires some empirical support is the claim that the development from 'temporary state' to 'presupposition' is unidirectional. As stated earlier, a key component in the process of grammaticization is semantic generalization. The productive use of *-dir* as a modal element with all predicates, regardless of their person/number marking, suggests that it has undergone a semantic bleaching. That component of meaning that at one time required that *-dir* be used only with third person subjects has been lost.

Another bit of evidence that favors the unidirectionality hypothesis is the fact that, among the languages that were looked into in the pilot study, there were only three languages in which the copula was a form that was bound to the stem: Hebrew, Buriat and Turkish. The first two cases appear to have sources in pronouns, and their affixal form might be seen as a natural development in the direction of person agreement markers. In contrast, Turkish was the only language with a verbal source for a copula that is bound. Bybee's view of grammaticization posits a correlation between semantic generalization and phonetic erosion, with more generalized meaning signaled by greater phonetic reduction

and fusion. The unusual nature of the Turkish form suggests that it has travelled further along the evolutionary path than the non-bound copular morphemes.

Finally, I would like to propose that the notion of temporariness is logically precedent to the notion of presupposition. I am certainly not the first to suggest that the directionality that has been observed in language change is driven by a transfer from the concrete experience to the abstract (cf. Traugott and König 1988 for a summary and discussion). The understanding of temporariness, of states reaching an endpoint, would seem to be a concept that is readily accessible to humans on a concrete level. On the other hand, the epistemic notion of possibility seems more abstract in that it requires the speaker to make use of the concrete artifacts of a situation to infer some outcome.

One problem persists in this analysis of the Turkish epistemic-sense copula. That is the fact that the 'temporary state' meaning which I have posited as an intermediate stage of development in the general schema does not appear to be a component in the meaning of the Turkish copula. Indeed, there is a counterintuitive clash of meanings when one considers the fact that, in Turkish, the copula contrasts with a zero and gives the sense of 'general validity' (see the examples in Figure 6 above), and at the same time has the epistemic use that I have attributed to a 'locative-to-temporary' path of semantic evolution. At present I can offer no firm resolution of this puzzle, except to revise my original conception of the path to view the development of the 'presupposition' sense. Under this revision, the epistemic sense is not viewed as a direct development of the copula, but rather a development specifically tied to the 'temporary' semantics. There is a 'fork in the road', as it were, and the single form can continue to develop on the path towards a general copular use, as well as functioning as a modal, a sense that is retained from an earlier stage of its evolution.

Figure 8: A Revised Path of Semantic Evolution for Turkish *-dir*

Footnotes

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²In Munro's reconstruction, the marker *-k* does not act as the copula by itself. Rather, it is supported in this function by the impersonal pronoun **pul*.

³Lyons 1968 appears to suggest just the opposite direction of development; i.e., location is derived from existence, in the sense that 'anything that exists must exist in some place.'

⁴Susan Herring has informed me that the optional presence of the copula in this sentence renders a change in its meaning. The sentence with the copula implies simple location, whereas the sentence without the copula implies a more permanent sense, i.e. 'Raman is planted in the garden.'

⁵ I am indebted to Soon Ae Chun for providing this example.

⁶ There is a point of logical convergence for these two points. That is that identificational copulas might also lend themselves to an interpretation of permanence of timeless truth. In this regard, Turkish might be a case that bears closer scrutiny since the forms of the copula for first and second person are former personal pronouns.

⁷ I believe that such a position is suggested in Claudi and Heine (1985) in which insight into some anomalies in the grammatical treatment of inalienable possessions in Ewe are explained by appealing to the meaning of the source item for the genitive item. William Pagliuca (p.c.) has articulated similar views, suggesting a 'windowing effect' through which past semantics are synchronically accessible.

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