Towards a Typological Classification of Modern Greek

Abstract

In the area of the Modern Greek verb, phenomena which consistently appear are head-marking, many potential slots before and/or after the verb root, noun and adverb incorporation, addition of adverbial elements by means of affixes, a large inventory of bound morphemes, verbal words as minimal sentences, etc. These features relate Modern Greek to polysynthesis. The main bulk of this paper is dedicated to the comparison of affixal and incorporation patterns between Modern Greek and the polysynthetic languages Abkhaz, Cayuga, Chukchi, Mohawk, and Nahuatl. Ultimately, a typological outlook for Modern Greek is proposed.

1. Clustering of polysynthetic features in Modern Greek

The comparison between the features which *tend to cluster* in polysynthetic languages and the features of the Modern Greek verb results in amazingly similar patterns, i.e.:¹

- (a) noun incorporation² into the verbal complex, cf. [1];
- [1] emo-ftíno³ blood-I.spit 'spit blood'
- (b) a large inventory of bound morphemes, cf. *kata-*, *para-*, *kse-*, *afto-*, *alilo-*, TAM and inflectional suffixes, together with a limited stock of independent stems, cf. especially foreign loans like *tést* 'test' and *asansér* 'elevator';
- (c) extended verbal words as minimal sentences, cf. [2];
- [2] na-mín-tu-to-ksana-pí
 MOD-NEG-to.him-it-again-say:PERF.SUBJ.3SG
 'He should not say it to him.'
- (d) pronominal marking of subjects and objects or other main actants on the verb form by means of affixes, cf. the pronominal object markers *tu* and *to* and the

¹ The following list is based on Fortescues's list of features that tend to cluster in polysynthetic languages (see Fortescue 1994, 2601). Minor adaptations have been made.

² In this paper, I use the term "incorporation" barring strict syntactic considerations which rely only on compositional patterns (cf. Baker 1996 a.o.). As we will see in sections 4.1 and 4.2, Modern Greek and polysynthesis exhibit both non-lexicalized (compositional) and lexicalized (non-compositional) patterns, whereby syntactic theory cannot give a homogenous account. Accordingly, a compounding/affixal analysis seems more adequate and is adopted here.

³ The usual citation form for the MG verb is the 1st person singular.

inflectional agreement marker for the 3rd person singular on the head verb in [2] above;

- (e) addition of adverbial elements into the verb complex by means of affixes, cf. the intensifier *pará* in [3];
- [3] para-trógo excessively-I.eat 'overeat'
- (f) many potential slots which can be filled with specific morpheme types, cf. the complexes in [4] and [5], which show a strict order of their contained elements;
- [4] dhen-tu-to-ksana-léo NEG-to.him-it-again-I.say 'I don't say it to him again.'
- [5] sixno-afto-dhiafimízete⁴ often-self-advertise:IND.NONACT.1SG.PRES 'He often advertises himself.'
- (g) non-configurational syntax, cf. the possible word orders SVO, VSO, etc.;
- (h) head-marking inflection (cf. [2] above).

In the following, I will discuss point (h), i.e. the head-marking patterns of Modern Greek.

2. Head-marking

The *head-marking* patterns relate Modern Greek to polysynthesis, in which the head-marking material is usually concentrated before a verbal head. These patterns appear esp. in the verbal agreement and the pronominal marking of actants (the so-called "clitics") before the verb root (see a dependent marking pattern for the "clitics" in [6] and its correlating head-marking pattern in [7]).

- [6] Dependent Marking

 Hédhos^Ma t-Mo vivlí-Mo st-Mo Jórg-Mo
 gave.1SG the-ACC book-ACC to.the-ACC Jórgos-ACC

 'I gave the book to Jórgos.'
- [7] Head Marking

 Mtu-Mto-HédhosMa

 to.him(GEN)-it(ACC)-gave.1SG

 'I gave it to him.'

where heads are indicated by superscript H, affixal markers by M.

⁴ In this complex, the valence operator *afto*- appears between the incorporated adverb and the verb base.

In polysynthesis, when nominal dependents appear together with pronominal markers on the verbal head, the role of the dependents is *appositive*, cf. [8] from Abkhaz, a North Caucasian language, where the nominal dependents 'man', 'woman', and 'book' are coreferential with the pronominal markers on the verb which constitutes a complete or minimal sentence.

[8]

```
a-xàc'a a-p\hbar°\dot{>}s a-\xi°q°'\dot{>} \emptyset-l-y-te-yt'. (Hewitt 1979, in Nichols 1986, 108) the-man, the-woman, the-book, it, to.her, he, gave-FINITE 'The man gave the woman the book.'
```

In languages with consistent head-marking such as Abkhaz, "full NP's are included only for emphasis, focus, disambiguation, etc." (Nichols 1986, 107). Similar patterns are attested in Modern Greek, in which the pronominal markers on the verb ("clitics") have the same reference as the external nominal phrases, which are included in the sentence for emphasis or disambiguation, cf. [9].

```
[9] (o Jánis) tu-to-édhos-e tu Jórgu to vivlío (Janis), to-him_k-it_j-gave-3S_i to Jórgos_k the book, 'Jánis gave Jórgos the book.'
```

Another important head-marking element in MG is *negation*, discussed in the next section.

3. Word in Modern Greek - Slot Patterns

In Cayuga, a polysynthetic language spoken in North America, eight major parts of the verb form can be distinguished. From left to right, these parts are (1) the prepronominal prefixes, (2) the pronominal prefixes, (3) the semireflexive/reflexive, (4) the incorporated noun root, (5) the verb root, (6) the derivational suffixes, (7) the aspect suffixes, and (8) the so-called extensions (see Table 1, taken from Sasse 1999, 81).

| CAYUGA VERB FORM | | | | | | | | |
|------------------|----------|---------|---------|------|----------|----------|--------|--|
| | | | | | | | | |
| | | BASE | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| PREPRO- | PRO- | REFLEX- | INCOR- | VERB | DERIVA- | ASPECT | EXTEN- | |
| NOMINAL | NOMINAL | IVE AND | PORATED | ROOT | TIONAL | SUFFIXES | SIONS | |
| PREFIXES | PREFIXES | SEMIRE- | NOUN | | SUFFIXES | | | |
| | | FLEXIVE | ROOT | | | | | |

Table 1

The base of the verb form is constituted by positions (3) through (6). The addition of an aspect suffix (position 7) yields the aspect stem. As Sasse (1998) ar-

gues, "everything having to do with the lexical meaning of the verb is in the base".

In Modern Greek we get similar patterns, whereby the main difference is that position (4) can be occupied by an adverb or a noun (verb forms with both an incorporated adverb and a noun, such as *sixno-kraso-pino* 'often'-'wine'-'drink' are not grammatical). [10] shows how the Greek verb form is organized in Indicative and Subjunctive. NEG stands for the prepronominal negation marker *dhen*, CON for the prepronominal contrastive (negation) marker *mi(n)*, FUT for the prepronominal future marker *tha*, MOD for the prepronominal modal marker *na*, PM₁ and PM₂ for the pronominal markers ("object pronouns" or "weak pronominals"), DS for possible derivation suffixes, AS for the aspect suffix, AGR for agreement.

[10]

```
a. NEG FUT PM_{1(goal)} PM_{2(theme)} ADV/N V DS AS AGR_{(subject)} (INDICATIVE) b. MOD CON PM_{1(goal)} PM_{2(theme)} ADV/N V DS AS AGR_{(subject)} (SUBJUNCTIVE)
```

[11a] and [11b] exemplify the patterns in [10a] and [10b], respectively.

[11]

- a. *dhén-tha-tu-to-ksana-dhó-s-i*NEG-FUT-PM₁-PM₂-ADV-V-AS-AGR
 not-will-to.him-it-again-give-PERF-3SG
 'He will not give it to him again.'
- b. *na-mín-tu-to-ksana-dhó-s-i*MOD-CON-PM₁-PM₂-ADV-V-AS-AGR

 should-not-to.him-it-again-give-PERF-3SG

 'He should not give it to him again.'

One cannot have both a referential object marker and a *referential* incorporated noun root as *theme*. Sentences such as [12] are ungrammatical (*i* is the coreference index).

```
[12] *ta-xarto-pézi
them<sub>i</sub>-cards<sub>i</sub>-he.plays
'He plays cards.'
```

The same is also true for the North Iroquoian language Mohawk (see Baker 1996, 22). As in the case of [12] the object agreement morpheme must be lost, cf. the grammatical [13a] with the ungrammatical [13b].⁶

⁵ A list of the "object pronouns" or "weak pronominals" can be found in Joseph (2002a, 3).

⁶ Baker (1996) names this type of incorporation "robust". According to him, noun incorporation is robust in a language if (a) it is reasonably productive, (b) the noun root is fully integrated with the verb morphologically, (c) the noun is referentially active in the discourse, and (d) both the noun root and the verb root can, in general, be used independently (see Baker 1996, 19).

[13]

- a. *Ra-wir-a-núhwe'-s* (Adapted from Baker 1996, 22) MsS-baby-Ø-like-HAB 'He likes the baby.'
- b. *Shako-wir-a-núhwe'-s MsS/FsO_i-baby_i-Ø-like-HAB

FUT and MOD are in complementary distribution in MG and define the position and form of the negation particle, which in [10b] is named CON (=mi(n)).⁷ A similar pattern exists in Cayuga, whereby the CONTRASTIVE prefix thi- $/th\bar{e}$ -/tha-: "regularly occurs as a substitute for the NEGATIVE prefix in combination with the modal prefixes where the NEGATIVE prefix is not allowed to occur" (see Sasse 1999, 83f).

In pattern [10b], the hortative prefix *as*- appears instead of *na*-, expressing advice/exhortation, cf. [14].

```
[14] as-min-tu-to-ksana-dhó-s-i
HORT-CON-PM<sub>1</sub>-PM<sub>2</sub>-ADV-V-AS-AGR
let-not-to.him-it-again-give-PERF-3SG
'He should not give it to him again.'
```

Another monosyllabic element that may appear before *na*- (see 10b) is *ja*- 'to', 'so as to', 'so that', etc. expressing purpose, cf. [15].

```
[15] ja-na-mín-tu-to-ksana-dhó-s-i
PURP-MOD-CON-PM<sub>1</sub>-PM<sub>2</sub>-ADV-V-AS-AGR
so.that-should-not-to.him-it-again-give-PERF-3SG
'So that he won't give it to him again.'
```

I am inclined to consider *ja*- as a pre-pronominal prefix. In Cayuga, there is a group of affixes known as the DISLOCATIVE (DIS) suffix group which always occurs in the suffix position (6), meaning 'go to do something', e.g. *-atawē*- 'swim': *-atawē-hne/a* 'go there to swim' (see Sasse 1999, 90), i.e. with a fixed position in a slot pattern as in the case of the MG *ja*-.

We must thus extend the subjunctive pattern in [10b] with the two patterns in [16]:

[16]

```
a.  \begin{array}{lll} \text{ADV/N-V-AS-AGR} & \text{(SUBJUNCTIVE)} \\ \text{b.} & \text{PURP-MOD-CON-PM}_{1(\text{goal})} & \text{PM}_{2(\text{theme})}\text{-ADV/N-V-AS-AGR} & \text{(SUBJUNCTIVE)} \\ \end{array}
```

Other criteria which advocate an affixal analysis of these weak pronominal elements are their *high selectivity of combination*, since in general they occur only

⁷ See Joseph (2000b, 107 n. 5) about the special status of mi(n).

with a verb, and the gaps in their combination, a phenomenon which is assumed to be typical of affixes, cf. [17] with the illegal order 1p-2p-verb.⁸

```
[17] *mu se dhósame (adapted from Joseph 1990, 177) to.me you we.gave 'They gave you to me.'
```

The *morphophonological idiosyncrasies* in the combination of these little elements also advocate an affixal analysis. For instance, when a weak pronoun in 3SG.ACC follows a weak pronoun in 2SG.GEN, the final -*u* of the first pronoun is deleted, as [18] exemplifies. This process does not fall in the domain of the general phonological rules in Modern Greek (see Joseph 1990; 2002a; 2000b for details).

```
[18] su-to-édhose → sto-édhose to.you-it-he.gave 'He gave it to you.'
```

Morphophonogical idiosyncrasies are very usual in polysynthetic languages, where affixal markers appear before a verbal head, i.e. within a word. For example, in the Algonquian language Cree, the pronominal markers *ni*- and *ki*- show idiosyncrasies such as the insertion of -*t*- before most vowel-initial stems, a phenomenon which (i) does not take place with the full forms of these reduced elements and (ii) does not comply with the general rules of Cree phonology (see Joseph 2002b, 95).

4.1 Noun Incorporation (NI)

In a language like Cayuga, the main type of incorporation is the *productive NI*, esp. the incorporation of the object (theme) into the verbal complex. Within the verb stem *-ahy-a-kw-* the element *-a-* is the so-called *stem-joiner* (SJ). As Sasse (1999, 85) notes "it does not have any meaning in and of itself but simply serves in tying the two roots together". This type of incorporation is very common and yields compounds from almost any verb, e.g. the root *-kw-* 'get, pick' can serve as basis for verbs like *-hnyōhs-a-kw-* 'pick squash/pumkins', *-yēt-a-kw-* 'get wood', etc. (see Sasse 1999).

Another type of incorporation in Cayuga is the *lexicalized NI* which yields NR + VR compounds in a specific sense, e.g. 'mind + drop' + REPETITIVE = 'forget', 'cold + enter' + BENEFACTIVE = 'get a cold or flu', 'throat + dry' = 'be thirsty', etc. (see Sasse 1999, 88).

⁸ Joseph (2000b) adopts the position made by Zwicky (1994, xiii) that the notion of clitic is not a genuine category in grammatical theory and can be rejected as unnecessary. According to this position, the binary division of the elements of grammar in *affixes* and *words* assigns these elements to morphology or syntax, respectively, and is indispensable. Clitics are thus considered as atypical affixes (for further details see Joseph 2000b, 89ff). For a syntactic approach see Philippaki-Warburton & Spyropoulos (1999), who consider pronominal clitics as phonologically dependent *words*.

The relevant patterns in Modern Greek show compositional and non-compositional semantics, cf. the following data:

```
[19] NI with compositional semantics (Smirniotopoulos & Joseph 1998, 472)

emo-ftíno 'spit blood'

kraso-píno 'drink wine'

lafo-kinigó 'hunt deer'

xarto-pézo 'gamble' (literally: 'play cards')
```

[20] NI with non-compositional semantics (Smirniotopoulos & Joseph 1998, 472) aero-kopanízo 'talk nonsense' (literally: 'beat the air') gaidharo-dhéno 'be sure', 'be positive' (literally: 'tie donkey') psomo-zitó 'be a beggar' (literally: 'ask for bread') psomo-trógo 'be poor' (literally: 'eat bread')

Apart from that, although spur-of-the-moment creations as *gato-vlépo* 'look at cats', 'be a cat-looker', *pito-trógo* 'eat pittas', 'be a pitta-eater', and *rodho-kiló* 'roll-tires', 'be a tire-roller' confirm the existence of a productive object-verb or NI pattern with an active and intransitive verb, the acceptability of these formations is extremely restricted. There is thus good reason to believe that NI in MG is a lexical, non-compositional, i.e. non-syntactic process (see Smirniotopoulos & Joseph 1998). In conclusion, NI in Cayuga and Modern Greek can be regarded as a compounding process sharing many similarities such as compositional and/or non-compositional semantics, morphological processes like the addition of union vowels, and slot patterns, in this case the appearance of a NR just before the VR.

Another kind of incorporation in polysynthesis is the incorporation of a NR with *instrument* role, cf. [21] from Mohawk with the incorporated noun root *hióhs* 'elbow' denoting a body part.9

```
[21] Wa'tekheiathióhsaienhte'. (Mithun 2004) wa'-te-khei-at-hiohs-a-ien-ht-' FACTUAL-DUPLICATIVE-1.SG/F.SG-elbow-SJ-hit-INSTR.APPL-PERF 'I hit her with my elbow.' = 'I elbowed her.'
```

Similar patterns are found in MG, cf. the verb *podh-o-pató* 'tread on sb/sth', consisting of the verb base *pató* 'tread' and the incorporated noun *pódhi* 'foot' denoting a body part having the instrument role.

4.2 Adverb Incorporation (AI)

Adverb incorporation is not a unique characteristic but only an indication of polysynthesis, cf. Cayuga which shows no adverb incorporation (see Sasse 1999) as opposed to Chukchi and MG, in which various adverbials appear before the verbal root (see [22] and [23], respectively).

⁹ Sasse (Cayuga 1999, 88) reports similar incorporation patterns in Cayuga.

[22]

a. no-tur-ew notejkokinet nelgot (Chukchi; Spencer 1995, 455)
ADV-new-ADV they are making skins

b. $n\partial$ -tur = tejk- ∂ kinet nelg- ∂ t 3PL.S-new = make-3PL.O skin-ABS.PL 'They are making skins again.'

[23]

a. *o Jánis gráfi ksaná tin perílipsi* the John writes again the summary

b. o Jánis ksanagráfi tin perílipsi the John again = writes the summary 'John writes the summary again.'

The patterns in [22] and [23] refer to *manner* adverbials. *Directionals* do also incorporate in Nahuatl and MG (see [24] and [25] respectively.

[24] *Ki-ČIN-Kwepa* (Sischo 1979, in Rivero 1992, 302) It-bottom-return 'He turns it bottom side up.'

[25] tha-to-anapodho-girísi (Rivero 1992, 289) FUT-it-upside.down-turn:PERF.3SG 'He will turn it upside down.'

There are many semantic and morphological complications, e.g. the free adverb phrase can have a different meaning than the "incorporated" pattern, cf. stékome kondá 'I stand closely' and kondostékome 'I stop for a little time' or the "incorporated" adverb can appear in an etymologically and morphologically distinct form than in the free adverb phrase, cf. perpatáo grígora and gorgoperpatáo, both meaning 'walk quickly' (see Smirniotopoulos & Joseph 1998 for further examples and details). Nonetheless, if we depart from a pure syntactic analysis we have to admit that there are some regular patterns which give MG adverb incorporation a character similar to that of regular and productive polysynthesis (see also next section).

5. Modern Greek in relation to compositional polysynthesis (Mattissen 2003)

According to Mattissen (2003, 281), the two main formational types in polysynthesis are:

(i) languages which use non-root bound morphemes [...] and allow only one root per verb complex, which we will henceforth call the affixal strategy, or (ii) languages which *ad hoc* combine more than one lexical root in a verb form to attain a polysynthetic form, called the compositional strategy.

"Ad hoc formations" are formations according to a regular/productive pattern. MG is categorically excluded from type (i), allowing more than one root per verb complex (cf. NI and AI in sections 4.1 and 4.2, respectively).

Mattissen (2003) regards ad hoc *verb root serialization* as a necessary condition for the assessment of compositional polysynthesis, a pattern which is marginal and semantically restricted in Modern Greek. I cite two examples from verb root serialization in Chukchi (see [26a] and [27a]) with the synonymous analytic counterparts (see [26b] and [27b], respectively).

[26]

```
(Skorik 1948, in Spencer 1995, 456)
a. tə-gagcaw=kətgəntat-g'ak
   ISG-hurry=run-1SG
   'I ran, hurrying.'
b. atlon
                         gagcaw-a nə-kətgəntat-qen
   he hurry-GER
                         PERF-run-3SG/PERF
   'He ran, hurrying.'
[27]
a. galga-t
                      nə-rine=ekwet-kinet
                                                        (Spencer 1995, 456)
   bird-ABS.PL
                      PL.S-fly=depart-3PL.S
b. galgat
                     rine-te
                                  nekwetkinet
   birds
                      fly-GER
                                  left
   'The birds flew away.'
```

Patterns such as those in [26] and [27] are not attested in Modern Greek. There are only a handful of verb root serializations, such as *anavo-svíno* 'switch onswitch off', *anev-o-katevázo* 'take up-take down, *anev-o-katevéno* 'go up-go down', *trogo-píno* 'eat-drink', *anigo-klíno* 'open-close', *beno-vjéno* 'come in-get out', mapped onto a concrete semantic pattern, i.e. (approx.) *action/opposite of the action (trogo-píno* may be better considered as a coordinative compound). The verbs *tremo-pézo* 'blink', 'flare', (literally: 'tremble-play') and *tremo-fégo* 'coruscate', 'flare' (literally: 'tremble-beam/radiate') are lexicalized formations.

These restricted patterns vis-à-vis verb root serialization force us to characterize Modern Greek as a language close but not identical to the polysynthetic "Mixed II" type, i.e. a language with non-root bound morphemes, noun incorporation (although restricted), with one or more roots per verb form (see NI in section 4.1 and AI in section 4.2). Polysynthetic languages of this type are Takelma and Blackfoot (this categorization relies on Mattissen 2003, 287; for the other subtypes of polysynthetic languages see Mattissen 2003).

6. Reference and predication strategies in Cayuga and MG

The appearance of the pronominal markers before a verbal head is massively influenced by discourse factors, cf. the following situations:

(a) John asks Mary what the teacher does with a pupil in the classroom. John can't see the scene. The book is mentioned as a noun in John's question (see [28]).

[28]

- a. John: *Tí káni tóra me to vivlío?*'What does he do now with the book?'
- b. Mary: *Tu-to-dhíni*. (Two pronominal markers: goal-theme) to.him-it-he.gives 'He gives it to him.'
- (b) John asks Mary what the teacher does with a pupil in the classroom. John can't see the scene. The book is not mentioned in John's question at all (see [29]).

[29]

- a. John: *Tí káni tora?* 'What does he do now?'
- b. Mary: *Tu-díni to vivlío*. (One pronominal marker: goal) to.him-he.gives the book 'He gives him the book.'
- (c) John asks Mary what the teacher does in the classroom. John can't see the scene. The book and the pupil is not mentioned at all in John's question (see [30]).

[30]

- a. John: *Tí káni tóra o dháskalos?* 'What does the teacher do now?'
- b. Mary: *Dhíni to vivlío sto mathití*. (No pronominal marker) he.gives the book to.the pupil 'He gives the book to the pupil.'

In [28b] there are two pronominal markers before the verbal head, in [29b] one and in [30b] none. This patterning is not the same with the patterning of pronominal markers in the North American polysynthetic languages. The pronominal markers in Cayuga, for example, are *obligatory* and in principle denote two core arguments, i.e. "agent" and "patient" or "actor" and "undergoer". The precise interpretation of these arguments is not fixed as opposed to the pronominal markers in MG where the first PM denotes the goal (or sometimes the beneficiary) and the second PM the theme (see section 2). The interpretation of the pronominal markers in Cayuga is conventionalized according to the lexicalized argument structure of the verb, e.g. the first argument may be agent, experiencer etc., the second argument may be patient, goal, location (in the last case with the addition of an applicative suffix), etc. (see Sasse 1999, 37ff).

On the top of that, the *elaboration* principle of sentence structure which appears in Cayuga and the other North American languages is not the same as in

MG. In particular, the appositive relation of a coreferential participant expression (word) to the pronominal markers of a verb base, denoting the fundamental situation, is not the same. As Sasse (1988, 194) argues, the verbal character of all minimal units (i.e. words) in the sentence, force this appositive relation as a functional necessity. To become less abstract, cf. [31] from Cayuga.

[31]

a-ka:khe:-'ke' te-kae-yah'she: kae-ksa:'-áh (adapted from Henry & Hill 1994) FAC-1SG/3PL-see DU-3PL.F/3SG.N-be.two.people 3PL.F/3SG.N-be.child-DIM 'I saw two children.'

All three sentence units in [31] are "verbs" and contain verb bases, i.e. $k\bar{e}$ 'see', yah'she: 'be two people', and ksa:'-áh 'be a child'. The pronominal two-place prefixes ka:khe and kae are referential and obligatory. The elaboration (approx.) 'I saw persons' \rightarrow 'they were two people' \rightarrow 'they were children' is forced by the verbal character of these three units, whereby the basic situation, i.e. (approx.) 'the seeing of persons', must be mentioned in the first place. This is not the case with a corresponding MG sentence, cf. [32].

[32] ta-ídha ta pedhiá them_i-I.saw the children_i 'I saw the children.'

In [32], the appositive relation of *ta pedhiá* to the pronominal marker *ta*- before the verb is not motivated by the verbal character of the contained units. In MG there is a clear Verb-Noun distinction, whereby the verb is the predicate and the noun is the argument of that predicate in the standard verb-object configuration. On the top of that, the pronominal marker *ta*- in [32] is *optional*, i.e. it can be absent in different contexts, as opposed to the North American polysynthetic languages (cf. [29] and [30]).

7. Conclusions

I conclude that MG is a language with a moderate, and in several cases strong, index of synthesis (the two extremes being *isolating* and *polysynthetic*) and a moderate index of fusion (the two extremes being *agglutination* – with straightforward segmentability – and *fusion* – with no segmentability) (see Comrie 1981, 43).

Nonetheless, the abundance of similar patterns between Modern Greek and polysynthetic languages point to the evolution of a new system away from the traditional dependent-marking strategy and simple synthesis towards head-marking and polysynthesis.

ABBREVIATIONS

| ABS | absolutive | M | masculinum |
|-------|----------------------|--------|---------------------|
| ACC | accusative | M | affixal marker |
| ADV | adverb | MG | Modern Greek |
| AGR | agreement | MOD | modal marker |
| AI | adverb incorporation | NEG | negation |
| APPL | applicative | NI | noun incorporation |
| AS | aspect suffix | NONACT | nonactive |
| CON | contrastive | NR | noun root |
| DIM | diminutive | O | object |
| DIS | dislocative | PERF | perfective |
| DS | derivation suffix | PL | plural |
| DU | dual | PM | pronominal marker |
| F | femininum | PRES | present |
| FAC | factual | PURP | purposive |
| FUT | future | S | subject |
| GEN | genitive | SG | singular |
| GER | gerund | SJ | stem joiner |
| Н | head | SUBJ | subjunctive |
| HAB | habitual | TAM | tempus-aspect-modus |
| HORT | hortative | TRR | transitivizer |
| INSTR | instrumental | V | verb |
| IND | indicative | VR | verb root |
| IND | indicative | | |

References

Baker, M. C. 1996. The Polysynthesis Parameter. New York, Oxford University Press. Comrie, B. 1981. Language Universals and Linguistic Typology. Chicago, The University of Chicago Press.

Fortescue, M. 1994. "Morphology, Polysynthetic", in R. E. Asher & J. M. Y. Simpson (eds), *The Encyclopedia of Language and Linguistics*. Vol. 5, 2600–02.

Henry, R. & H. L. Hill (eds). 1994. A:gwéh Goga:'. Vol. 7. Brantford, Ontario, Woodland Cultural Centre.

- Joseph, B. D. 1990. "The Benefits of Morphological Classification: On Some Apparently Problematic Clitics in Modern Greek", in W. U. Dressler, H. C. Luschützky, O. E. Pfeiffer & J. R. Rennison (eds), Contemporary Morphology. Berlin, Mouton de Gruyter, 171–81.
- —. 2002a. "'Word' in Modern Greek", in R. M. W. Dixon & A. Y. Aikhenvald (eds), Word: A Cross-Linguistic Typology. Cambridge, Cambridge University Press, 243–65. (PDF version at www.ling.ohio-state.edu/~bjoseph/publicat.htm)
- —. 2002b. "Defining 'Word' in Modern Greek: A Response to Philippaki-Warburton & Spyropoulos 1999", in G. Booij & J. van Marle (eds), Yearbook of Morphology 2001. Dortrecht, Kluver Academic Publishers, 87–114.

Mattisen, J. 2003. *Dependent-Head Synthesis in Nivkh*. Amsterdam, John Benjamins. Mithun, M. 2004. "The Non-Universality of Obliques". Talk at the conference *Syntax of the World's Languages*, Leipzig, 5 August 2004 (Handout).

- Nichols, J. 1986. "Head-Marking and Dependent-Marking Grammar", *Language* 621, 56–119.
- Philippaki-Warburton, I. & V. Spyropoulos. 1999. "On the Boundaries of Inflection and Syntax: Greek Pronominal Clitics and Particles", in G. Booij & J. van Marle (eds), *Yearbook of Morphology 1998*. Dortrecht, Kluver Academic Publishers, 45–72.
- Rivero M.-L. 1992. "Adverb Incorporation and the Syntax of Adverbs in Modern Greek", Linguistics and Philosophy 15, 289–331.
- Sasse, H.-J. 1988. "Der irokesische Sprachtyp", Zeitschrift für Sprachwissenschaft 7.2, 173–213.
- —. 1999. Cayuga. MS. Canberra, Research Centre for Linguistic Typology.
- Sasse, H.-J. & A. Keye 1998. Far More than One Thousand Verbs of Gayogoho:no' (Cayuga). A Handbook of Cayuga Morphology. MS. Universität zu Köln & Woodland Cultural Centre, Brantford, Ontario.
- Smirniotopoulos, J. C. & B. D. Joseph. 1998. "Syntax versus the Lexicon: Incorporation and Compounding in Modern Greek", *Journal of Linguistics* 34, 447–88.
- Spencer, A. 1995. "Incorporation in Chukchi", Language 71.3, 439-89.
- Zwicky, A. M. 1994. "What Is a Clitic?", in J. A. Nevis, B. D. Joseph, D. Wanner & A. M. Zwicky (eds), Clitics: A Comprehensive Bibliography 1892–1991. [Amsterdam Studies in the Theory and History of Linguistic Science, Series V: Library & Information Sources in Linguistics, 22]. Amsterdam & Philadelphia, John Benjamins, xii–xx.

Key-words: polysynthesis, Modern Greek, head marking, incorporation, reference, predication.