

# DIALECTAL VARIATION IN GREEK SIGN LANGUAGE (GSL): THE EMERGENCE OF INDICATORS, MARKERS AND STEREOTYPES

Vasiliki Zacharopoulou, Klimis Antzakas & Dimitris Papazachariou

*University of Patras*

Στην παρούσα μελέτη περιγράφουμε και κωδικοποιούμε την διαλεκτική ποικιλία της Ελληνικής Νοηματικής Γλώσσας, και πιο συγκεκριμένα, τη διαλεκτική ποικιλία ανάμεσα στη Θεσσαλονίκη και την Πάτρα, συγκρίνοντας αναλύσεις βιντεοσκοπημένων αφηγήσεων Κωφών πληροφορητών από τις δύο παραπάνω περιοχές. Μελετώντας τη διαλεκτική ποικιλία, όπως αυτή πραγματώνεται στις παραπάνω βιντεοσκοπημένες αφηγήσεις, διαπιστώνουμε ότι κωδικοποιούνται σε δύο βασικές κατηγορίες, τη φωνητική ποικιλότητα και τη λεξική ποικιλότητα. Η φωνητική ποικιλότητα πραγματοποιείται μέσω της χρήσης ενός διαφορετικού συστατικού απ' αυτά που απαρτίζουν τις μορφολογικές μονάδες της νοηματικής γλώσσας, όπως η χειρομορφή, η κίνηση, η τοποθεσία, ο προσανατολισμός της παλάμης ή των δαχτύλων είτε ακόμη και τα μη χειρικά στοιχεία (non-manual features) της μορφολογικής μονάδας της νοηματικής γλώσσας, τα οποία λειτουργούν όπως οι τεμαχιακές φωνολογικές μονάδες (Pfau & Quer 2010). Η λεξιλογική ποικιλότητα αφορά νοήματα-λέξεις που αποδίδουν την ίδια σημασία αλλά διαμορφώνονται με εντελώς διαφορετική μορφή, αφού ο σχηματισμός των νοημάτων αυτών γίνεται με ένα εντελώς διαφορετικό συνδυασμό των διακριτών στοιχείων που συνθέτουν τα νοήματα της νοηματικής γλώσσας. Επιπλέον, διαπιστώσαμε την εμφάνιση λεξικής ποικιλότητας σε συγκεκριμένες σημασιολογικές κατηγορίες, όπως στις σημασιολογικές κατηγορίες των αριθμών, των χρωμάτων, των χωρών, των πόλεων και των ημερών της εβδομάδας. Οι συγκεκριμένες σημασιολογικές κατηγορίες εμφανίζουν λεξικολογική ποικιλότητα και σε πολλές άλλες νοηματικές γλώσσες. Τέλος, διαπιστώνουμε ότι η κοινωνιογλωσσική χρήση των παραπάνω ποικιλοτήτων μπορεί να τις κωδικοποιήσει σε ενδείκτες, χαρακτηριστές και στερεότυπα, ακριβώς με τον ίδιο τρόπο που κωδικοποιούνται και στις ομιλούμενες γλώσσες.

**Keywords:** Greek Sign Language, dialectal variation, indicators, markers, stereotypes

## 1. Introduction

The study of sign languages worldwide (see among others: Woll et al. 1991; Stamp et al. 2014; 2015; Schembri et al. 2018 for BSL (British Sign Language), Johnston & Schembri 2007 for AUSLAN (Australian Sign Language); Lucas et al. 2001 for ASL (American Sign Language) and for LIS (Italian Sign Language) Geraci et al. 2011) has repeatedly proved their linguistic nature, as well as their structural similarities with

oral languages. Among other structural similarities, variation has also been realized to exist at different linguistic levels (phonetic/phonological, morphological, syntactic and lexical) of sign languages.

The present study has a twofold aim: to describe and document dialectal variation in Greek Sign Language (= GSL), more specifically, dialectal variation between Thessaloniki and Patras, through a comparative analysis of the video narratives of Deaf people from these areas, as well as to reveal their sociolinguistic function, as dialectal indicators, markers and stereotypes (Labov 1972).

## 2. Greek Sign Language

Greek Sign Language (GSL), the natural language of the Greek deaf community, is not a construct; rather, it is the product of spontaneous development stemming from the need for contact and communication between Deaf people. In fact, both older and recent research on sign languages (= SL) throughout the world testifies to the fact that sign languages exhibit structure and behaviors which run parallel to spoken languages. Unfortunately, research on GSL and its users is lacking compared to SLs of other Western countries. To date, GSL has not been documented thoroughly nor has there ever been investigation into its possible variations.

### 2.1. Variation in Sign Languages

Variation is one of the most significant aspects of human languages, as it provides users with multiple choices for multiple expressive purposes. Studying variation in American sign language (= ASL) (Lucas et al. 2001), in Italian sign language (= LIS) (Geraci et al. 2011) as well as in British sign language (BSL) (Stamp et al. 2014; 2015), the conclusion that was drawn was that there is both internal language variation pertaining to traits and constraints of language itself, as well as sociolinguistic variation which connects these traits to social factors such as place of residence, age, gender, signer's SL school of attendance, and others.

There is language variation in spoken as well as in sign languages. For instance, studying variation in the AUSLAN (Australian SL) lexicon, Johnson & Schembri (2007) have identified variants among signers from different parts of Australia

and have consequently grouped them into the northern and the southern dialectal variation.

Aside from lexical dialectal variations, studies on sign languages such as BSL have revealed that there may also be variation in those elements/units which compose the sign language morpheme, that is, the equivalent phonological units. In the present study, this type of variation shall be referred to as phonetic.

More specifically, distinct elements such as handshape, movement, position, palm/finger orientation, and non-manual features<sup>1</sup>, combine and construct morphemes, functioning as phonological units (Pfau & Quer 2010). Variation, in the way each one of these phonological units is realized, may be characterized either as free variation or complementary distribution, due to the activation of phenomena which are analogous to the phonological ones.

### 3. Methodology

The presentation and analysis of phonetic and lexical variation in GSL is based on video material from two regions in Greece: Thessaloniki and Patras. Thessaloniki data were collected from video narratives of Deaf signers communicating in GSL. The particular narratives were also used by sign language centers for GSL proficiency evaluation of hearing people. We also used freely accessible online videos of SL vocabulary which are used as teaching material in Thessaloniki's Centre of The Greek Sign Language. Data from Patras were similarly collected from video narratives of Deaf signers as well from SL vocabulary videos, also part of the material taught in Patras Sign language Centre. Considering that the main objective of the present study was to identify possible dialectal variation in GSL, we ensured that participants were not different in terms of their other social characteristics. Hence, they were all male individuals belonging to the same, 35 to 50 years old, age group. Our research material is

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<sup>1</sup> In the present study, we opted for the term “non-manual” features to avoid confusion with the term “non-gestural” features (gestures are not part of SLs and, as such, they are distinguished from signs which are part of all SLs. Non-manual features are thus not realized manually, as is denoted by their name. Such features include facial expression, eye movement, posture, mouth shape, head movement (Johnson & Schembri 2007).

also complemented by participatory observation in the deaf community as well as in classes of the Sign Language Centre in Patras.

The ELAN 5.4 program is used to analyze and process the linguistic material. The glossing method we used to report our results is the following: the lemma (gloss) of the sign is written in capital letters — following the bibliographical standards of sign languages, — while variants were numbered consecutively. To distinguish between prominent variants which are encountered more often in one of the two regions, the name of the region was placed within parenthesis after the gloss of the sign, i.e., PROBLEM 1 (Patras), PROBLEM 2 (Thessaloniki). The overall duration of the collected video material was 2 hours and 15 mins.

## 4. Results

### 4.1. Phonetic variation

Data analysis rendered two types of systematic variation: phonetic variation<sup>2</sup> and lexical variation<sup>3</sup>. More specifically, in the 2 h 15 min long video data, 261<sup>4</sup> lemmas exhibited geographical variation, of which 91 lemmas represented phonetic variation and 170 lemmas represented lexical variation.

Lemmas with phonetic variation varied in relation to one of the distinct elements which make up the morphological unit of a sign language: i.e., handshape, position, movement, orientation and non-manual features.

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<sup>2</sup> According to Stamp et al. (2014), this type of variation involves variants in terms of one parameter (handshape, position, movement, location, orientation, non-manual features), and it has been characterized by the authors as phonological variation. However, in the present study, we shall refer to this type of variation as phonetic, following the theory of spoken language variation, since different realizations do not alter meanings.

<sup>3</sup> Lexical variation refers to sign-words/lemmas which render the same meaning but are realized with completely different handshapes, that is, with different combinations of the sign distinct elements.

<sup>4</sup> The selection of the 261 lemmas followed the completion of the study of the video material from Thessaloniki and Patras. We first identified those lemmas with the same meaning, and we then checked their variation parameters.

The majority of lemmas (76) varied in relation to the handshape parameter. For instance, as is shown in pictures 1 and 2, the lemma PROBLEM<sup>5</sup> exhibits phonetic variation in terms of the handshape. Indeed, in comparison with Patras (Picture 1) where three fingers are used to produce the sign (index finger, middle finger, thumb), all fingers are used to articulate the variant in Thessaloniki (Picture 2).



**Picture 1:** PROBLEM 1 (Patras)

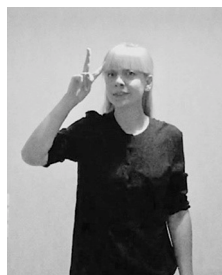


**Picture 2:** PROBLEM 2 (Thessaloniki)

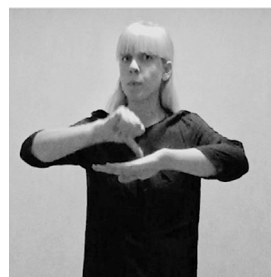
Moreover, in our samples, 8 lemmas varied in the position parameter, such as the lemma GERMANY where the two variants are articulated with the same handshape (closed palm, index and middle fingers are extended). The movement is repetitive in both cases. However, in Patras, the handshape is positioned on the signer's forehead whereas in Thessaloniki, the handshape is positioned next to the lateral side of the signer's head, at the level of his/her eyes (Pictures 3 and 4 respectively).

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<sup>5</sup> The present study could not be quantitative on the basis of the 2 h and 15 min long material. On the other hand, identification of dialectal variation between Thessaloniki and Patras was qualitatively corroborated through the systematic variation (be it complete or significant) of realizations by signers from the two areas. For instance, the lemma PROBLEM was systematically realized as PROBLEM 2 (17 out of 20 cases) by signers from Thessaloniki, while it was systematically realized as PROBLEM 1 (14 out of 15 cases) by signers from Patras. Similarly, the lemma CITY was systematically signed as CITY 2 by signers from Thessaloniki (19 out of 19 cases), and as CITY 1 by signers from Patras (16 out of 16 cases). The above systematic variation was revisited and corroborated in an oral questionnaire of visibility and acceptability of dialectal types, addressed to participants by the field researcher at a subsequent research stage, for the purpose of checking findings in the video analysis. Conclusions are presented in section 5.

**Picture 3:** GERMANY 1 (Patras)**Picture 4:** GERMANY 2 (Thessaloniki)

Furthermore, 12 lemmas varied in terms of orientation. For instance, the lemma CITY is produced when dominant hand's palm is closed and the thumb is extended. The handshape moves once on the non-dominant hand having a flat palm, which forms the *B* handshape<sup>6</sup>. In the case of Patras, the flat hand of the non-dominant hand<sup>7</sup> has an upward orientation whereas signers from Thessaloniki orientate the palm downward, as is depicted in pictures 5 and 6 respectively.

**Picture 5:** CITY 1 (Patras)**Picture 6:** CITY 2 (Thessaloniki)

Additionally, 10 lemmas appeared as variants in terms of the movement, as is the case of the lemma FACEBOOK, where variants are formed into the *B* handshape with both hands. In Patras, the hands move away from the cheeks of the signer with

<sup>6</sup> The *B* Handshape is created when all fingers are extended and joined together.

<sup>7</sup> When a two-handed sign is articulated employing two different handshapes, one hand is passive — non-dominant — while the hand which performs the movement is dominant (Brentari 1998).

a repeated alternate movement, while in Thessaloniki, hands are moved away from the signer's cheeks simultaneously with a repeated movement. The difference is presented in pictures 7 and 8 respectively.



**Picture 7:** FACEBOOK 1 (Patras)



**Picture 8:** FACEBOOK 2 (Thessaloniki)

The above-mentioned variants are considered phonetic since they vary in the realization of the distinct elements of the sign language morphemes. We could even regard individual variants as **free variations** since they a) do not alter the meaning of lemmas, b) do not show a complementary distribution, and c) reflect the geographical origin of signers. The equivalent free variation of the spoken dialects are the dark [l] in the North of Greece and of the palatal [ɭ] in Patras.

## 4.2. Lexical variation

Lexical variation, which was also documented in video narratives, is a fundamental category of dialectal variation. Of the total 261 lemmas that exhibited geographical variation in our research, 170 were lexical variants. More specifically, this category includes lemmas which possess the same meaning but vary in their form, since they are produced by an entirely different combination of the sign phonological elements.

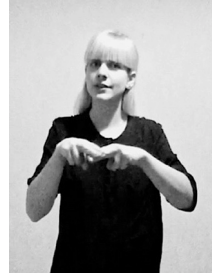
Variation studies in other sign languages, such as BSL (Stamp et al. 2014; Schembri et al. 2010; 2018), and AUSLAN (Johnson & Schembri 2007) classified lexical variation into specific semantic categories, such as those of numbers, colours, countries, cities, weekdays.

Drawing on the video narratives of Deaf from Thessaloniki and Patras, we discovered that lexical dialectal variation appeared in the majority of the above categories. Regarding colors, lexical variation between the two sample cities appeared

in lemmas such as SILVER, BLACK, WHITE, GREY, COLOUR. Pictures 9 and 10 present two lexical variants of the lemma GREY in Patras and Thessaloniki.



**Picture 9:** GREY 1 (Patras)



**Picture 10:** GREY 2 (Thessaloniki)

The pictured lexical variant SILVER 1 is formed by a handshape with closed palm and extended thumb and little finger. It is placed on natural space and the movement is to the lateral side. However, the lemma GREY 2 is entirely different. In this case, we have a two-handed sign in neutral space where both hands have a closed palm with index and middle finger extended. Fingers are in contact, dominant hand above non-dominant, and the dominant hand moves repeatedly to and away from the signer.

Numbers also constitute a semantic category which is marked by lexical variation. In this category, examples of lemmas showing variation in the sample cities are the following: FIFTEEN 1 (Patras) — FIFTEEN 2 (Thessaloniki) or NINETEEN 1 (Patras) — NINETEEN 2 (Thessaloniki) or NINE 1 (Patras) — NINE 2 (Thessaloniki). In pictures 11 and 12, we can see the lexical variants of the lemma “FIFTEEN” in Patras and Thessaloniki.



**Picture 11:** FIFTEEN 1 (Patras)



**Picture 12:** FIFTEEN 2 (Thessaloniki)



The lexical variant of number FIFTEEN 1 in Patras is articulated with the two-handed 5 handshape<sup>8</sup>. Hands are placed on neutral space<sup>9</sup>, the non-dominant hand remains static whilst the dominant hand moves upward once, contacting the non-dominant hand. Conversely, the handshape of number FIFTEEN 2 in Thessaloniki is carried out with one hand only. The handshape has all fingers extended with the middle finger and the thumb bent. Both fingers repeatedly move and contact each other.

The category of cities also provided evidence of lexical variation. Examples of lemmas which have been derived from our analysis are the following: SERRES 1 (Patras) — SERRES 2 (Thessaloniki) or MAINLAND GREECE 1 (Patras) — MAINLAND GREECE 2 (Thessaloniki), and others.

Countries also represent a category where lexical variation appeared between the two sample cities, such as with the lemma MEXICO 1 (Patras) — MEXICO 2 (Thessaloniki) or LUXEMBOURG 1 (Patras) — LUXEMBOURG 2 (Thessaloniki) or IRAQ 1 (Patras) — IRAQ 2 (Thessaloniki) or IRAN 1 (Patras) — IRAN 2 (Thessaloniki).

Our analysis also brought forth the existence of a semantic category which is not mentioned among the semantic categories of BSL and AUSLAN. The said semantic category includes lemmas for the months of the year, such as the lemmas JUNE 1 (Patras) — JUNE 2 (Thessaloniki), JULY 1 (Patras) — JULY 2 (Thessaloniki), SEPTEMBER 1 (Patras) — SEPTEMBER 2 (Thessaloniki). It should also be noted that the sign itself for MONTH varies: MONTH 1 (Patras) — MONTH 2 (Thessaloniki). Pictures 13 and 14 show the variants of the lemma JUNE<sup>10</sup>. As can be seen, in Patras, the lexical variant JUNE 1 is a two-handed sign. Handshapes are

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<sup>8</sup> In the 5 handshape, all fingers are extended.

<sup>9</sup> The handshape could be positioned in the space in front of the signer (neutral space) or on his/her body (Johnson & Schembri 2007: 90).

<sup>10</sup> Due to the small volume of data, we were unable to carry out an exhaustive quantitative analysis. However, the lexical dialectal variants in our material exhibit the same pattern of systematic variation (whether complete or significant), as was also noted in the case of phonetic dialectal variants. For instance, the lemma GREY was realized mainly as GREY 2 (19 out of 23 cases) by signers from Thessaloniki, and as SILVER 1 (13 out of 14 cases) by signers from Patras. Additionally, the lemma JUNE was signed as JUNE 2 by all signers from Thessaloniki (22 out of 22 cases), and as JUNE 1 by all signers from Patras (25 out of 25 cases). The above systematic variation was revisited and corroborated in an oral questionnaire of recognition and acceptability of dialectal types, addressed to participants by the field researcher

closed palms with the thumb extended and placed on neutral space. The movement is repeated alternative up and down. By contrast, in Thessaloniki, the lexical variant JUNE 2 is a compound sign. The palm is closed with extended thumb and palm orientation is away from the signer. The hand is placed on the forehead and moves to the lateral side. Then the handshape changes to closed palm with extended index and middle fingers and moves to the neutral space having a short downward movement.



**Picture 13:** JUNE 1 (Patras)



**Picture 14:** JUNE 2 (Thessaloniki)

Lexical variation was also encountered in lemmas which do not belong to any of the already mentioned categories. They are rather considered to be part of the daily language lexicon, such as the lemmas: CAT 1 (Patras) — CAT 2 (Thessaloniki), EGG 1 (Patras) — EGG 2 (Thessaloniki), ANIMALS 1 (Patras) — ANIMALS 2 (Thessaloniki), CHEESE 1 (Patras) — CHEESE 2 (Thessaloniki), and others.

In the same vein, lexical variation was exhibited in lemmas pertaining to new technologies such as INTERNET 1 (Patras) — INTERNET 2 (Thessaloniki). Woll et al. (1991) also mentioned the same in their study on lexical variation in BSL.

Partly responsible for such lexical variation seems to be lexical borrowing. A common practice among signers is to borrow a lemma exactly as used in the other sign language. The lemma AUSTRALIA 1 (Patras) is an indicative example of a borrowed sign as used by Australian signers to sign the name of their country. The same applies to ASL as stated by Lucas et al. (2001) who believe that signers employ this method as a way to express their admiration for other cultures.

Furthermore, we observed that some lemmas constitute a paraphrase of the other sign language lemma. Such is the case of the lemma NEW ZEALAND 1

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at a subsequent research stage, for the purpose of verifying or rejecting findings in data analysis. Conclusions are presented in section 5.

(Patras) in Patras' variety, which is created by adding the GSL sign *NEW* to the lemma used by New Zealanders to sign the name of their country.

Other lemmas are created as a result of the lexicalization of country names in spoken Greek, through fingerspelling. The lemma *NEW ZEALAND 2* (Thessaloniki) is created with the sign *NEW* and the letter *Z*<sup>11</sup> of the manual alphabet.

Moreover, extensive is the borrowing from ASL due to the latter's omnipresence and prestige. For instance, in GSL and ASL, the lemma *BULGARIA 2* (Thessaloniki) is signed in an identical way.

### 4.3. Sociolinguistic function of dialectal variation

The degrees of recognition and acceptability of lexical dialectal elements is an equally noteworthy feature. In fact, we identified lemmas which are specific to Thessaloniki but are nonetheless unknown to Deaf from Patras (i.e., *CHEESE 2* (Thessaloniki), *JUNE 2* (Thessaloniki)) and vice versa. Deaf signers from each community do not recognize the dialectal reference of these lemmas, a behaviour that allows us to characterize the above variables as **indicators** (Labov 1972).

There are lemmas that in Thessaloniki's variety were expressed by only one form (for example: *JUNE 1*, 22 times out of 22 possible occasions). The same lemmas in Patras' SL were expressed by a different form (i.e., *JUNE 2*, 25 times out of 25 possible occasions). Moreover, when Patras' Deaf participants were asked about Thessaloniki's variants, they recognized them, but they consider them as 'wrong' therefore they do not use it. This linguistic behavior and the negative attitudes that are allocated on Thessaloniki's variants, determines the above variants as **stereotypes**, according to Labov's definition (1972).

Alternatively, there are other lexical variables with two different variants, which both the variants were found in the video recordings from Thessaloniki and Patras, but in systematically different way. Patras' signers use more one of the two variants, when Thessaloniki's signers systematically use the other. For example, Thessaloniki's signers use 19 times out of 23 possible occasions the *GREY 1* form, when Patras' signers use 13 times out of the 14 possible occasions the other lexical variant, i.e., *GREY 2*. This linguistic behavior determines the above variants as **markers** (Labov 1972).

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<sup>11</sup> The manual alphabet or finger spelling represents the spoken language alphabet. Although it is part of most SLs, it is not an inherent part of them (Sutton-Spence & Woll 1999).

## 5. Conclusions

The present study represents a first attempt to research variation in GSL. The objective was to investigate and document dialectal variation in GSL through a comparative analysis of the video narratives of Deaf coming from two different areas of Greece, Patras and Thessaloniki. Drawing on data analysis, the following points surfaced:

- (i) Dialectal variation is realized both at a lexical (where same meaning lemmas have a different form), and at a phonetic level.
- (ii) In GSL, lemmas exhibiting phonetic variation differ in the way one of their distinct sign components are realized, be it handshape, palm/finger position, movement, or orientation.
- (iii) In GSL, as in other sign languages (i.e., British and Australian), the most common semantic categories that show lexical dialectal variation, are those of numbers, colors, cities, countries and new technologies.
- (iv) Our data analysis revealed the existence of dialectal variation in the months of the year, which has not been documented in other sign languages.
- (v) Finally, our analysis showed that dialectal variants of GSL serve different sociolinguistic functions which are analogous to that of indicators, markers and stereotypes as defined by Labov (1972).

Furthering future analysis of geographical variation in GSL lexicon would be useful inasmuch as it would include more geographical areas and would pursue the correlation between the described characteristics and social and other linguistic factors.

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