NOTES ON GILYAK

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1. INTRODUCTION

1.1 SOURCES. Chinese records since the chronicles and topographies written under the Yüan dynasty (1271–1341) carry historical and anthropological information about the Gilyaks designated there as 吉里迷 *Chi-li-mi* or 乞列迷 *Ch'i-lieh-mi*. There is an impressive tradition of valuable accounts from the *K'ai-yüan hsin chih* of the XII–XIV centuries until *Hsi-pe-li tung p'ien chi yao*, a report about Eastern Siberia compiled by Ts'ao T'ing-chieh in 1885 and printed in 1935.[1] The most instructive sources date from the fifteenth century, beginning with the Tyr inscription soon after 1413.[2]

In the mid-seventeenth century the Cossack accounts (*skaski*) of the first Russian expeditions to the Amur, led by I. JU. Moskvitin, V. D. Pojarkov, and E. P. Xabarov, informed the Muscovites about the Gilyaks (giljackie ljudi) and their salient features.[3] A Pole, Adam Kamieński-Dłużyk, taken prisoner by the Russians in 1657 and sent to the Amur region, left a few ethnographic observations on the Gilyaks in his diary.[4] A map of Siberia made in Tobolsk in 1672 was perhaps the first to take account of the Gilyak people (*giljanskie ljudi*) and their territory (*giljanskaja zemlja*).[5] The remarkable writings on Asian geography by N. G. Spafarij-Melesku, after his diplomatic journey

1. Cf. Sei Wada, "The Natives of the Lower Reaches of the Amur River as Represented in Chinese Records," *Memoirs* of the Research Department of the Toyo Bunko, No. 10 (Tokyo, 1938); Moritaka Takahashi, "Historical Sketch of the Gilyaks from Chinese Sources" (to appear).
2. See P. Popov, "O Tyrskikh pamjatnikax," *Zapiski* Vostočnogo Otdelenija I. Rus. Arxeologičeskogo Obščestva, Vol. XVI (1906); K. Naitô, Dokushi Zôroku (Tokyo, 1929); *Ocherki istorii SSSR*. Period feodalizma. IX–XV vv., Part I (Moscow, 1953), p. 751.
3. Cf. M. I. Belov, Russkie morexody v Ledovitom i Tixom Okeane (Moscow, 1951), p. 51 ff.; *Dopolnenija k Aktam istoričeskim*, Vol. III (Moscow, 1848), documents Nos. 12, 100, 102; N. P. Čulkov, "Erofej Pavlov Xabarov, dobytčik i pribyl'ščik XVII veka," *Russkij Arxiv*, XXXVI (1898), p. 178 ff.; M. O. Kosven, "Materialy k istorii russkoj ètnografii XVII veka," *Sovetskaja Ètnografija*, 1955, No. 1, p. 136 ff.
4. A. Kamieński Dłużyk, "Dyarusz więzienia moskiewskiego, miast i miejsc," *Warta*, ed. by N. Maryanski (Poznań, 1874).
5. See A. Titov, Sibir' v XVII veke (Moscow, 1890), p. 41 ff.; D. M. Lebedev, Geografiija v Rossii XVII veka (Moscow, 1949), p. 25 ff.

to China in 1675–1678, pay attention both to the continental (Amur) Gilyaks and to their insular (Sakhalin) fellows.[6]

At the turn of the seventeenth century there appeared the first books of Western travelers briefly referring to the Gilyaks:[7] Nicolaas Witsen, *Noord en Oost Tartaryen* (Amsterdam, 1692); Philippe Avril, *Voyages en divers états d'Europe et d'Asie pour découvrir un nouveau chemin à la Chine* (Paris, 1693). Evert Ysbrandszom Ides, the Dutch traveler to China in Moscow service, published the account of his trip, *Driejaarige reize naar China*, first in Dutch (Amsterdam, 1704), then in German, English, and French. He notes the location of the Amur Gilyaks, and the *Populi Giliaki* figure on his map. From the seventeenth century, Japanese documents mention the Gilyaks, and, according to M. Takahashi, the first Japanese publication to cite the Gilyaks was a geography of Hokkaido, *Matsumae-tô-gôchô*, 1700.

Throughout the eighteenth century the Gilyaks were depicted in Chinese literature, but remained beyond the horizon of Russian and Western European travelers to Asia. Gilyak is the only Paleosiberian language omitted in P. S. Pallas' *Linguarum totius orbis vocabularia comparativa* (SPb. 1787–1789). G. W. Steller's *Beschreibung von dem Lande Kamtschatka* (Frankfurt-Leipzig, 1774), p. 57, states that one shore of the lower Amur "von einer besonderen Nation bewohnet ist, die Giljacken genennet werden, und...in sinesischen Gehorsam leben." The account of Jean de La Pérouse's journey in 1785–1788, *Voyage autour du monde*, III–IV (Paris, 1797) describes the Sakhalin population without distinguishing the Gilyaks from the Ainu natives. The same inadvertence is apparent in W. R. Broughton's *Voyage of Discovery to the North Pacific Ocean...Performed in the Years 1795, 6, 7, 8* (London, 1804).

The first navigator to present many valuable observations about the Sakhalin Gilyaks and their way of life was Kruzenštern who made his voyage around the world from 1803 to 1806 and published his travelogue first in Russian[8] and then in numerous translations—German, Swedish, Dutch, English, Italian, and French. Almost at the same time the Japanese traveler Rinzô Mamiya

6. "Skazanie o reke Amure," in A. Titov, Sibir′ v XVII v., pp. 105–113; JU. V. Arsen′ev, "O proisxoždenii Skazanija o velikoj reke Amure," *Izvestija* I. Rus. Geogr. Obščestva, Vol. XVIII, No. 4 (1882); N. G. Spafarij, Opisanie pervyja časti vselennyja, imenuemoj Azii, v nej že sostoit Kitajskoe gosudarstvo s pročimi ego gorody i provincii (Kazan′, 1910).
7. Cf. A. Andreev's survey in *Sovetskij Sever*, I (1938), p. 47 ff.
8. I. Kruzenštern, Putešestvie vokrug sveta v 1803, 4, 5 i 1806 godax, 3 vols. (St. Petersburg 1810–1814).

drafted a concise description of the insular and continental Gilyaks.[9]

Important exploratory work on the Amur and Sakhalin was done during the fifties by Russian and Western travelers, beginning with the 1849–1855 expedition of G. I. Nevel'skoj, which brought back the first detailed data about the Gilyaks;[10] several further accounts of trips to this area appeared in both Occident and Orient. Thus *A Voyage down the Amoor with a Land Journey through Siberia and Incidental Notices of Manchooria, Kamchatka, and Japan* was published in New York, 1860, by Perry McDonough Collins, the commercial agent of the United States for the Amur River, at the same time as *Kita-Ezo-Yoshi*, a detailed description of the Sakhalin Gilyaks by the writer and traveler, Takeshirô Matsuura, appeared in Japan.

Père L. Furet's *L'Archipel Japonais et la Tartarie Orientale* (Paris, 1857) contains some ethnographic notes about the Gilyaks of the Baie de Joncquières on Sakhalin and a list of a hundred words in their vernacular, but since he did not disclose the ethnic name of these natives, the vocabulary was overlooked by later students of Gilyak. At the same time as Père Furet, the English seaman, J. M. Tronson, R. N., observed the Amur natives and after many vain efforts "to discover some trace of a written language amongst the Ghiliacks" recorded "some words in the Ghiliack tongue" in: *Personal Narrative of a Voyage to Japan, Kamtschatka, Siberia, Tartary, and Various Parts of the Coast of China* (London, 1859), p. 325. This collection, however, proves not to be a Gilyak vocabulary at all, but a list of Tungus words. In 1868 a Japanese traveler, Kansuke Okamoto, published *Kita-Ezo-Shinshi*, a description of the North Sakhalin aborigines, with more than a hundred Gilyak words recorded in the "kana" syllabary. Furet's and Okamoto's lists are the first two printed contributions to a Gilyak lexicon, since the Gilyak dictionary prepared in the fifties by the Russian explorer, K. I. Maksimovič, and the four hundred entries of the Russian-Yakut-Gilyak-Tungus-Negidal dictionary collected at the beginning of the nineteenth century by a member of Kruzenštern's party, Lieutenant G. I. Davydov, lie unpublished in the Archives

9. Mamiya Rinzô, Kita-Ezo-Zusetsu, an account of a trip to Sakhalin in 1808, published 1855; *idem*, Tô-Tatsu-Kikô, a report about an expedition to eastern Siberia, in particular to the Amur region, also printed in 1855.

10. Cf. B. Polevoj, "Ètnografičeskie nabljudenija G. I. Nevel'skogo (1849 god)," *Sovetskaja Ètnografija*, 1955, No. 4; A. Smoljak, "Èkspedicija Nevel'skogo 1850–1854 gg. i pervye ètnografičeskie issledovanija XIX v. v Priamur'e, Primor'e i na Saxaline," *ibidem*, 1954, No. 3.

of the Russian Academy of Sciences.[11]

After several ethnographic sketches on the Gilyaks, N. Seeland drafted the first brief (and amateurish) survey of Gilyak sounds, grammatical forms, and lexical differences between the continental and insular dialects with a few samples of Gilyak sentences.[12]

Substantial progress in Gilyak studies was achieved when the abundant anthropological and linguistic information, collected by the expedition of L. Schrenck and P. Glehn in 1854–1856 to the Amur region and Sakhalin, was processed and published.[13] The editor of the linguistic material, W. Grube, was the first qualified linguist to study Gilyak. The data collected by the expedition were, however, too inadequate to enable the editor to make reliable phonetic and grammatical conclusions or to establish the exact forms of the numerous words recorded. Nonetheless, this first detailed dictionary of Gilyak provided the initial data for a discussion of the relationship between Gilyak and the surrounding languages. Thus P. G. von Moellendorf used Grube's material to point out the structural connection of Gilyak with the Ural-Altaic type of languages, some morphological ties with Korean, a number of Chinese loanwords, close lexical ties with Eastern Tungus and traces of a proximity to Ostyak-Samoyed (Sel'kup)—briefly, most of the questions of kinship and affinity which still preoccupy the students of Gilyak.[14]

The basic need for the further development of Gilyak studies was, primarily, good recorded texts. This work was widely and remarkably performed by two political exiles to the Gilyak region, L. JA. Šternberg and B. Piłsudski. Of the rich folklore material collected by Šternberg, so far only the first part of the first volume has appeared,[15] while a considerable part of his records,

11. See I. S. Vdovin, Istorija izučenija paleoaziatskix jazykov (Leningrad, 1954), p. 163; cf. Dvukratnoe putešestvie v Ameriku morskix oficerov Xvostova i Davydova, 2 parts (St. Petersburg, 1810–1812).
12. N. L. Zeland, "Zametka o giljackom jazyke," *Trudy* Ètnografičeskogo Otdela Obščestva Ljubitelej Estestvoznanija, Antropologii i Ètnografii pri Moskovskom Universitete, Vol. VII (1886), p. 185 ff.
13. L. v. Schrenck, Reisen und Forschungen im Amur-Lande in den Jahren 1854–56, Vol. III in 3 parts: Peoples of the Amur Region (St. Petersburg, 1881–1895); supplement to Vol. III: W. Grube, Linguistische Ergebnisse, part 1: Giljakisches Wörterverzeichniss nebst grammatischen Bemerkungen (St. Petersburg, 1892).
14. P. G. von Moellendorf, "The Ghilyak Language," *The China Review*, Vol. XXI (Hongkong, 1894), pp. 141–146. These questions were recently taken up again and developed in a stimulating paper by E. A. Krejnovič, "Giljacko-tunguso-man'čžurskie jazykovye paralleli," *Doklady i soobščenija* Instituta Jazykoznanija, Vol. VIII (1955), pp. 135–167.
15. L. JA. Šternberg, Materialy po izučeniju giljackogo jazyka i fol'klora, Vol. I, Part I (St. Petersburg, 1908); cf. also his "Obrazcy materialov po izučeniju giljackogo jazyka i fol'klora," *Izvestija* I. Akademii Nauk, Vol. XIII (1900), pp. 387–434. Valuable lexical data are scattered throughout Šternberg's ethnographic studies; for the list of his Gilyak studies consult: R. Jakobson, G. Hüttl-Worth, and J. F. Beebe, Paleosiberian Peoples and Languages: A Bibliographical Guide (New Haven, Conn., 1957), ## 2:163–2:176.

as well as his Gilyak dictionary and grammatical notes, still await publication.[16] And a critical edition of Piłsudski's splendid collection of Gilyak lyric songs was prepared in the 1930's, but unfortunately never appeared.[17]

While both of these field workers were much more concerned with anthropological questions than with the science of language, the inter-war period saw new important linguistic research in the Gilyak area. The most astute of the Russian scholars was E. Krejnovič. His notations of Amur Gilyak texts were the first linguistically exact and reliable records; therefore the still-awaited publication of his linguistic and folklore specimens and of his long-since completed dictionary, is an urgent necessity. Krejnovič's concise outline of Gilyak,[18] along with his monograph on its phonemic and morphophonemic pattern[19] as well as his study on Gilyak numerals,[20] exhibit an exemplary capacity for objective observation. Finally, his responsible participation in the creation and pedagogical use of the Gilyak literary language displayed a high linguistic aptitude.[21] Step by step, Krejnovič overcame his methodological and theoretical incertitude, and during the thirties, only the pressure of Marr's bias diverted him from a thorough structural analysis and especially from a sound historical interpretation of the facts which he himself had so skillfully discerned.

Krejnovič's records of the Amur dialect are apparently the most accurate Gilyak linguistic data available at present, and therefore it is primarily his material which is utilized and reinterpreted in my study. The value of Krejnovič's notations is particularly obvious when compared with previous accounts of Gilyak. The complaints "against the Gilyak language and its unsteady, so-to-say fluttering forms," made by the noted orientalist, Zaleman, on the basis

16. See *Pamjati L. JA. Šternberga* (Leningrad, 1930), p. 18.
17. Cf. B. Piłsudski, "Poezya Giliaków," *Lud*, Vol. XVII (1911), pp. 95–123; *idem*, "The Gilyaks and Their Songs," *Folk-lore*, Vol. XXIV (1913), pp. 477–490. One Gilyak song, written down by Piłsudski, appeared in C. H. Hawes's book, In the Uttermost East (New York, 1904), p. 260 f.
18. E. A. Krejnovič, "Nivxskij (giljackij) jazyk," *Jazyki i pis'mennost' narodov Severa*, Part III=Institut Narodov Severa, *Trudy po Lingvistike*, Vol. III (Leningrad, 1934), pp. 181–222.
19. Fonetika nivxskogo jazyka=*Same series*, Vol. V (Leningrad, 1937). With an instructive description of Gilyak speech sounds, prepared in the Laboratory of Experimental Phonetics at Leningrad University by L. R. Zinder and M. I. Matusevič under L. V. Ščerba's guidance (pp. 105–130).
20. Giljackie čislitel'nye (Leningrad, 1932). Cf. also V. Z. Panfilov, Nivxskie količestvennye čislitel'nye, published by the Institut Jazykoznanija (Leningrad, 1953).
21. For the list of Krejnovič's textbooks for Gilyak primary schools and his studies on the Gilyak language and customs see our Bibliography, ## 2:73–2:88. Krejnovič's ethnographic papers are rich in lexical data, much more precise in his studies after his expedition to the Amur Gilyaks in 1931–32. "Oxota na beluxu u giljakov derevni Puir," *Sovetskaja Ètnografija*, 1935, No. 2, contains revealing information about the role of taboo in hunters' language.

of Šternberg's materials,[22] are quite justified, since the native informants dictating their tales to Šternberg were instructed by him to separate words by artificial pauses (cf. Krejnovič's *Fonetika*, p. 15). Consequently, the intricate sandhi laws of Gilyak were destroyed, the consonantal alternations distorted, and the recorder of such dismembered speech naturally believed the choice of the alternant forms by the speaker to be quite arbitrary. Neither the sound pattern nor the grammatical system could be grasped under such conditions.

In Japan the linguistic study of Gilyak began with N. Akira's brief sketch of the Southern (Poronai) variety of insular Gilyak[23] and has developed during the last two decades: Takahashi's painstaking outline supplements a grammatical introduction to Sakhalin Gilyak by valuable folklore specimens and by a large Gilyak-Japanese and Japanese-Gilyak vocabulary;[24] Takeshi Hattori, expert in Gilyak folklore and in such lexical problems as kinship terminology, fishing vocabulary, verbal taboo, and honorific expressions, presented a summarizing synopsis of Gilyak for the Japanese *Introduction to the Languages of the World*.[25]

In the recent post-war development of Russian linguistics, an emphasis on the analysis of the Gilyak grammatical pattern may be noted. Efforts to specify the Gilyak type of incorporation in comparison with other Paleosiberian languages, from Meščaninov's deliberations to Panfilov's challenging essay,[26] actually resume Sapir and Kroeber's discussion in *The American Anthropologist*, XII (1911) about the different kinds and degrees of incorporational processes. Attempts at a more accurate and comprehensive description of the morphological pattern are being undertaken.[27]

22. See V. Bogoraz, *Étnografija*, Vol. III (1927), p. 277.
23. Akira Nakanome, Grammatik der Nikbun Sprache (des Giljakischen)=*Research Review* of the Osaka Asiatic Society, Vol. V (1927).
24. Takahashi Moritaka, Giriyâku bumpô (Tokyo, 1941): Cf. the list of his Gilyak studies in our Bibliography, ## 2:185–2:189.
25. Hattori Takeshi, "Giriyâku," *An Introduction to the Languages of the World*, Vol. II (Tokyo, 1955), pp. 753–775. For the list of his studies see our Bibliography, ## 2:41–2:47.
26. I. I. Meščaninov, Novoe učenie o jazyke (1936), Obščee jazykoznanie (1940), Členy predloženija i časti reči (1945), Glagol (1948); G. M. Korsakov, "Inkorporirovanie v paleoaziatskix i severoamerikanskix indejskix jazykax," *Sovetskij Sever*, IV (1939); K. A. Novikova and V. N. Savel'eva, "K voprosu o jazykax korennyx narodnostej Saxalina," *Učenye Zapiski* Leningradskogo Gosudarstvennogo Universiteta, No. 157 (1953); V. Z. Panfilov, "K voprosu ob inkorporirovanii," *Voprosy jazykoznanija*, 1954, No. 6.
27. I had no access to Savel'eva's outlines: "Ličnye i vozvratnye mestoimenija v nivxskom (giljackom) jazyke," *Vestnik* Leningradskogo Universiteta, 1948, No. 7; "Sklonenie imen suščestvitel'nyx v nivxskom jazyke," Leningradskij Gosudarstvennyj Pedagogičeskij Institut imeni A. I. Gercena, *Učenye Zapiski* Fakul'teta Narodov Severa, No. 101 (1954); also Krejnovič and Savel'eva, "Ob imeni prilagatel'nom v nivxskom jazyke," *V pomošč' učitelju škol Krajnego Severa*, No. 6 (Leningrad, 1956).

It is time to apply the devices of a consistent structural analysis to the puzzling problems of this peculiar language in its descriptive and genetic aspect.[28]

1.2 GRAMMATICAL ESSENTIALS. A Gilyak sentence consists of *syntactic sections* in fixed grammatical order. The sentence is an intonational unit, the section, a stress unit. Pauses are compulsory between sentences, optional between sections of a sentence, and inadmissible within a section. There are striking differences between intersectional and intrasectional laws of phonemic combinations.

Example: /ṭ'i/=personal pronoun, 2nd Pers. Sg., /ṭxəf/ 'bear', /oRla/~/oRlaⁿ/ 'child, cub,' /r'o-/ 'to carry,' /-ra/ predicative suffix 2nd and 3rd Pers. Sg.: (1) /ṭ'i ṭxəv—oRlaⁿ—t'o-ra/ 'you carried the bear's cub.' (2) ṭ'izɣəf oRlaⁿ—t'o-ra/ 'your bear carried the cub.' (3) /ṭ'izɣəf—oRla r'o-ra/ 'your bear's cub carried (something).'

Morphemes, the minimal grammatical constituents of a sequence, may be classified according to the place which they occupy in a syntactic section.

Gilyak distinguishes morphemes never occurring in an initial position (*suffixes*) from those which do occur initially (*roots*),[29] and among roots, those which occur uniquely in initial position (*grammatical* [=pronominal] roots)[30] from those which may occur both in initial and non-initial position (*lexical* [=non-pronominal] roots).

On the other hand Gilyak distinguishes morphemes which occur uniquely in final position (*desinences*)[31] from those which occur in non-final positions (*thematic morphemes*), and among thematic morphemes those which occur only in non-final positions (*verbal thematic morphemes*) from those which may occur

28. Cf. R. Jakobson, "Langues paléosibériennes," *Les Langues du Monde* (Paris, 1952), in particular a scrutiny of a few Gilyak sentences (p. 423 ff.); R. Austerlitz, "Gilyak Nursery Words," *Word*, Vol. XII (1956).
29. The morphemes /-ṭ'i-/~/-si-/ 'to put, to place,' and /-p'i-/~/-fi-/ 'to reside, to be placed' occupy an intermediate place between verbalizing suffixes and verbal roots: they occur only after a nominal stem just as suffixes do, but, on the other hand they present initial fortes just as roots do: /təf—ṭ'i-/ 'to put in the house,' /ŋo-vəj—si-/ 'to put under the barn' (/-vəj-/ 'under' is a nominal thematic suffix), /təf—p'i-/ 'to be in the house,' /huru—fi-/ 'to be in the brush-wood,' /pal-erqⁿ—p'i/ 'to be beside the mountain.'
30. About grammatical roots used as prefixes see below, § 2.4.
31. The only exception from the absolutely final position of a desinence in the syntactic section is the rare use of the predicative desinence /ta/~/ra/ after a case desinence in elliptic sentences. See Krejnovič, *Nivxskij jazyk*, p. 206: /ṭ'i aŋ-ux ɣe-ⁿ -ṭ-ŋa? kəuk-ux-ta./ 'From whom did you take it? It's from Kəuk.' (/-ux/ is the Ablative desinence).

both in final and non-final position (*nominal thematic morphemes*).[32] By combining the two criteria and taking into account both the beginning and the end of the syntactic section, the suffixes may be divided into *desinential* and *thematic* suffixes, the latter together with the roots form the class of *thematic morphemes;* furthermore, both nominal and verbal roots are divided into two types: lexical roots and grammatical (pronominal) roots.[33]

Examples of different types of roots: lexical nominal root /mu/ 'boat,' grammatical nominal root /ŋəŋ/ 'we,' lexical verbal root /rəu-/ 'to teach,' and grammatical verbal root /ha-/ 'to do it.' Distributional rules determining their position in the syntactic section are different for each of these four types of morphemes.

Without a following morpheme:	*With a following morpheme:*	*With a preceding morpheme:*
/mu/ 'boat'	/mu-ɣu/ 'boats'	/əz—mu/ 'master's boat'
	/mu-rox/ 'to the boat'	/pil—kar—mu/ 'very large boat'
	/mu—ɣəlmr'/ 'boat plank'	/aŋ—mu/ 'whose boat'
	/mu—se-u-/ 'to dry the boat'	
/ŋəŋ/ 'we'	/ŋəŋ-ux/ 'from us'	.....
	/nəŋ—mu/ 'our boat'	
	/ŋəŋ—k'u-/ 'to kill us'	
.....	/rəu-ja/ 'teach'	/ŋəŋ—asq—rəu-ja/ 'teach our younger brother'
	/rəu—ŋivx/ 'teaching man'	/aŋ—təu—ŋivx/ 'whose teacher'
.....	/ha-r/ 'while doing it' (2nd and 3rd Pers. Sg.); /ha-t/ 'while doing it' (Plur. and 1st Pers. Sg.)	.....

A *simple* section contains one morpheme, a *complex* section, more than one. Only a nominal root may be used as a simple section: /ral mɣe-ra/ 'the frog paddled,' /ŋi os-t xa-inə-ŋan/ 'I, after having got up, had been prepared to shoot.' The root with the following thematic suffixes, if any, is called a

32. The relationship between two thematic suffixes in SE Gilyak, the nasal verbal suffix, and the nominal suffix /-ŋ/, which designates animate beings, remains an open question.

33. The verbal roots, are divided into two subclasses: verbal roots proper and adjective roots. Cf. /təu-/ 'to get accustomed'—/piu-/ '(to be) black.' These two subclasses, the verbal roots proper and the adjective roots, the latter occurring only before thematic morphemes (specifically adjective suffixes: /piu-la-/ 'black,' /pil-jo-/ 'larger,' /pil-kar-/ 'very large'; general verbal suffixes: /təi-^{n} -pos/=[təibos] 'blue stuff,' /təi-^{n} -ŧ/=[təiḍ] 'being blue'; and nominal roots: /əɣr-qan/ 'black dog') are not discussed in this paper.

stem; the root with all following suffixes (thematic and desinential), if any, is called a *word*. A *monothematic* section contains one stem, and a *polythematic* section, more than one. For example, /vi-^{n}-ku-inə-ŋan/=[viguinəŋan] 'as soon as one is prepared to order the start of a journey' is a monothematic section (root /vi-/ 'to go'; thematic suffixes: causative /-ku-/, compulsorily preceded by the verb-signal /-^{n}-/, and the projective /-inə-/; desinence: antecedent /-ŋan/). Five stems are included in the polythematic section, /pəi—mu—meŋ—vo—ŋivx/ 'aviator,' literally 'a man /ŋivx/, holding /vo-/ the rudder /meŋ-/ of a flying /pəi-/ boat /mu/.' A word may figure either as a monothematic section or as a component of a polythematic section.[34]

Within a polythematic section, the preceding word is subordinated to the word which immediately follows: thus /pəi-/ is the attribute of /mu/, and /vo-/ of /ŋivx/, /meŋ/ is a direct object of /vo-/ and /mu/ an attributive object of /meŋ/.[35]

Finally the noun may function as an apposition: /ətik—so/ 'crucian,' literally 'grandmother-fish'; /ŋafq—vax/ 'stone used to measure the depths of the sea,' literally 'friend-stone'; /aŋx—qʻotrʻ/ 'female-bear.'

Since in Gilyak the subject precedes the predicate, they naturally cannot be parts of one section: /oʀla rʻo-ra/ 'the child carried,' /oʀla^{n}—tʻo-ra/=[oʀladʻora] 'carried the child'; /ikim oʀla/ 'Ikim is a child.' Since within a section the preceding word is subordinated to the following one, paratactic words cannot be parts of one section. That explains such current Gilyak constructions as /pos-ko oxt-ɣo^{n}—ke-/ 'to buy both cloth and powder'/ (see Krejnovič, *Nivxskij jazyk*, p. 199). The conjunction is a thematic suffix in Gilyak.

Briefly, the fusion of two words into one syntactic section takes place always and only when the stem of the subordinated word is immediately followed by the subordinating word.

1.3 Phonemic Essentials. Of the two basic varieties of Gilyak, the NW dialect is used by some ⅘ of this people, namely, by the continental Gilyaks, concentrated for the most part around the lower reaches of the Amur River,

34. In this paper a hyphen is used to separate the morphemes within a word, and a dash, to separate stems within a polythematic section.

35. Only the grammatical verbal root presents an exception from this rule: cf. a SE Gilyak sample (Krejnovič, *Fonetika*, p. 30) /hu-n—tleu-la-n—ʈʻirʻ/ 'this white hill.'

and by their fellow tribesmen on the west coast of Sakhalin, while the rest of the insular Gilyaks speak the SE dialect. In this study the data of the NW dialect will mainly be interpreted. The symbols used here for rendering the phonemes of this language mostly follow the Latin characters adapted for Gilyak in 1931 by E. A. Krejnovič and his native assistants and used in the regional schools and publications until the end of the thirties. For the fortis (voiceless) counterpart of the Gilyak lenis (voiced) constrictive /r/ the symbol *r'* is chosen in agreement with the Krejnovič alphabet, since the plosive fortis sounds are similarly rendered by *p'*, *t'*, etc., and since both the aspiration of these plosives and the voicelessness of the corresponding constrictives implement one and the same relevant feature, their fortis character, manifested, as Ščerba and his disciples, Zinder and Matusevič, disclosed in their phonetic investigations of Gilyak, by a more forceful air stream.[36]

The componential analysis of Gilyak phonemes enables us to resolve them into the following bundles of distinctive features.[37]

	t	t'	r	r'	p	p'	v	f	ŧ	ŧ'	z	s	k	k'	γ	x	q
vocalic vs. non-vocalic ...	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
consonantal vs. non-cons..	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
grave vs. acute.....	−	−	−	−	+	+	+	+	−	−	−	−	+	+	+	+	+
compact vs. diffuse	−	−	−	−	−	−	−	−	+	+	+	+	+	+	+	+	+
nasal vs. oral.....	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
flat vs. plain.....	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
strong vs. weak.....	−	+	−	+	−	+	−	+	−	+	−	+	−	+	−	+	○
continuant vs. abrupt	−	−	+	+	−	−	+	+	−	−	+	+	−	−	+	+	−
strident vs. mellow	○	○	○	○	○	○	○	○	○	○	○	○	−	−	−	−	+

	R	n	m	ŋ	ŋ	l	j	i	(w)	u	ə	e	o	a	h	#
vocalic vs. non-vocalic	−	−	−	−	−	+	+	+	+	+	+	+	+	+	−	−
consonantal vs. non-cons	+	+	+	+	+	+	−	−	−	−	−	−	−	−	−	−
grave vs. acute	+	−	+	−	+	○	−	−	+	+	+	−	+	+	○	○
compact vs. diffuse	+	−	−	+	+	○	−	−	−	−	−	+	+	+	○	○
nasal vs. oral.....	−	+	+	+	+	○	○	○	○	○	○	○	○	○	○	○
flat vs. plain.....	○	○	○	○	○	○	○	○	+	+	−	○	+	−	○	○
strong vs. weak.....	○	○	○	○	○	○	−	+	−	+	○	○	○	○	+	−
continuant vs. abrupt	+	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
strident vs. mellow	+	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

36. According to the later Krejnovič correction to the Gilyak alphabet, ŧ' (and not *c*) is used here for the aspirated counterpart of ŧ. The constrictive, corresponding to the uvular plosive /q/ received no symbol in the Gilyak practical alphabet and is rendered in this study by R, in agreement with the international phonetic habit. In the phonetic transcription R' renders the fortis variant of the uvular constrictive.

37. For the definition of the features see R. Jakobson and M. Halle, Fundamentals of Language (Hague, 1936), pp. 29–44.

This table requires a few elucidations.

The phoneme /w/ is put into parentheses, because at present it exists only in the SE dialect, whereas in the NW dialect /w/ merged with /v/ (cf. § 2.8).

Gilyak phonemes with the vocalic feature and without the consonantal feature may be divided into vowels, devoid of phonemic laxness, and semivowels, endowed with this feature. Vowels are syllabic, semivowels are non-syllabic. NW Gilyak has only one semivowel, /j/.

Gilyak has only one liquid phoneme possessing both a vocalic and a consonantal feature, the liquid /l/, and only one phoneme with neither vocalic nor consonantal feature, the glide /h/.

Consonants—phonemes with the consonantal feature and without the vocalic feature—are divided into nasals and orals or obstruents. Vowels and obstruents present the maximum contrast; all transitional types—semivowels, liquid, and nasals are sonorants.

The binary opposition of compact (genetically forward-flanged) and diffuse (backward-flanged) is clear-cut in Gilyak: any Gilyak vowel and consonant is either compact or diffuse, and any diffuse vowel or consonant has its compact counterpart. The division of vowels into compact (wide) and diffuse (narrow) is morphophonemically supported by the unproductive, but distinct principle of vowel harmony, dividing all vowels into two corresponding and mutually alternating series—/o/, /a/, /e/ and /u/, /ə/, /i/. Both the grave (genetically peripheral) and the acute (genetically medial) consonants (nasals as well as obstruents) are divided into compact and diffuse. The series of acute compact consonants includes the pre-palatal stops /ʈ/, /ʈ'/, and nasal /ɳ/ as well as the post-alveolar "somewhat hushing" constrictives /z/, and /s/ (see Zinder and Matusevič, pp. 116, 118 f.). The acute diffuse consonants are represented by the dentals /t/, /t'/, /n/ and the corresponding constrictives, optionally flaps, the voiced lenis /r/ and the voiceless fortis /r'/.

The opposition strong *vs.* weak is implemented in vocalic phonemes as syllabic /i/ and SE /u/ *vs.* non-syllabic /j/ and SE /w/ (cf. /qlai-/ 'to speak' —/qlaj/ 'trap'), in the plosive obstruents as aspirated fortes *vs.* non-aspirated lenes (cf. /p'u-/ 'to go out'—/pu/ 'to ripen,' /k'eŋ/ 'sun'—/keŋ/ 'whale,' /t'əx/ 'forehead'—/təx/ 'grip,' /ʈ'o/ 'fish'—/ʈo/ 'shore'), and in the constrictive obstruents as voiceless fortes *vs.* voiced lenes (cf. /fi-/ 'to bore'—/vi-/ 'to go,' /xe-/ 'to put on'—/ɣe-/ 'to take,' /r'a-/ 'to roast'—/ra-/ 'to drink,' /su-/ 'to

untwist'—/zu-/ 'to wash'). This opposition of strong and weak obstruents is valid only for the initial phoneme of the word. Only in the initial position, aspirated and non-aspirated plosives, as well as the prevocalic /h/ and zero (♯), (e. g., /hif/ 'birch-bark'—/if/ 'he') are mutually opposed; in the other positions there is no /h/, medially plosives are pronounced without aspiration, and they are slightly aspirated in final position (cf. Austerlitz, p. 263). As to the voiceless and voiced constrictives, their distribution in non-initial positions is conditioned uniquely by their phonemic environment: the non-initial constrictive is voiceless before a plosive and at the end of a syntactic section, and voiced in all other positions (cf. /təf/ 'house,' /təf—kəlmr'/ 'house plank,' /təv—r'ə/ 'house door,' /təv—lət-/ 'to make a house,' /təv—əlx-/ 'to open the house'; /os/ 'root,' /os-t/, /oz-r'/, /oz-ŋan/—different forms of the verb /os-/ 'to rise,' /-oz-u-/ 'to raise'; /oxt/ 'powder,' /haɣs/ 'clothes,' /velɣ/ 'harpoon,' /eʀa/<Gold /exan/ 'cow,' /ʈas/<Rus./čas/ 'hour,' Loc. /ʈaz-ux/). Only when the constrictive is preceded by the initial plosive, some oscillations take place. The compact constrictives in this position are voiceless: [ʈʀ'ar'] 'firewood,' [ʈʀ'a] 'money,' [txəvr'p-] 'to forget,' [t'xə-] 'top,' [pxə-] 'to return,' [-ksu-]~[-ɣsu-] 'not to have done.' When the prefixed 2nd Sg. pronoun /ʈ'i/ or the reflexive pronoun /p'i/ loses its vowel, the following voiced constrictive becomes voiceless. Cf. [qaʀ'] 'chief dog in the bear festival'—[ʈ'ʀ'aʀ'] 'your dog,' and [q'aʀ'] 'spear'—[ʈ'ʀ'aʀ'] 'your spear,' [zu-] 'to wash'—[p'su-] 'to wash oneself.' But diffuse (dental and labial) constrictives after prefixed pronouns offer some traces of a distinction between voiced and voiceless: cf. [t'əx] 'forehead'—[t'r'əx] 'your forehead,' [təx] 'grip'—[t'rəx] 'your grip, [p'aʀ'] 'window'—[ʈ'faʀ'] 'your window,' [paʀ'] 'stone' —both [ʈ'faʀ'] and [ʈ'vaʀ'] 'your stone' are possible.

In the series of grave compact (velar) obstruents Gilyak distinguishes /q/ and /ʀ/ from /k/ and /ɣ/. About their articulatory differences see the instructive observations of Zinder and Matusevič (pp. 115, 121). The two uvulars, the affricate /q/ and the markedly fricative /ʀ/, with their typical, snoring rattle, are strident in contrast to the mellow /k/ and /ɣ/. Uvulars occur only in a syllable with a compact vowel (/o/, /a/, /e/). The immediately prevocalic uvulars have a further limitation: they appear uniquely before a grave compact (/o/ or /a/); [38] the strong velars in this position are always

38. In combination with /v/ and /l/ the initial velar is strident before any compact vowel: cf. /qvalx-/ 'to drag,' /qves/ 'pole,' /qlai-/ 'to talk,' /qlaj/ 'trap,' and /kvər'/ 'intestine,' /k'lu-/ 'to fear.'

uvular ([q'a], [ʀ'a], [q'o], [ʀ'o]), while the weak velars are usually uvular. Only a few "words....of foreign origin, ceremonial, or affective" (Austerlitz, p. 263) present an initial [k] and its alternant [ɣ] before /a/ and /o/: /ka/ 'steel' (< Gold /gan/), /kaskazi-/ 'to be plain, forward' (cf. Gold /kas/ 'straight'), /kok/ 'an idol of the god protecting twins' or 'the knob on the lid of a pot,' /kon/ 'an animal with unusually long hair.' Thus the phonemic opposition strident *vs.* mellow is represented only by the pair of /q/-/k/ and their constrictive alternants /ʀ/-/ɣ/: /qa-/ 'to drift with the stream'—/ka/ 'steel,' SE /jasqam-/ 'to take away'—/jaskam-/ 'to teach' (Krejnovič, *Fonetika*, p. 96), /taqr'/ 'on the other side'—/takr'/ 'in which direction,' /loʀi/ 'crane'—/loɣi-/ 'slightly open' (Austerlitz, p. 263). The fortis voiceless uvular constrictive [ʀ'] and the corresponding fortis aspirated uvular plosive [q'] in such instances as the alternant forms [ʀ'a-]~[-q'a-] 'to shoot' are simply contextual variants (allophones) of the phonemes /x/ and /k'/. But the same [ʀ'] and [q'] in a non-initial position, e.g., in [taʀ'] 'epidemic' or [asq'] 'younger sibling' are contextual variants of the phonemes [ʀ] and [q], because in non-initial postions [ʀ'], [ʀ], or [q'], [q] are in complementary distribution, whereas the difference between strident and mellow is distinctive: cf. /taʀ/ 'epidemic' and /asq/ 'younger sibling' with /tax/ 'remnants of fat' and /ask/ 'spider.'

After nasals any plosive undergoes voicing, compulsory only in prevocalic position. The voicing of aspirates is incomplete (cf. Zinder and Matusevič, pp. 109, 111). In certain positions the NW dialect drops the nasal. Besides the prevocalic nasal, generally preserved, only the immediately postvocalic nasal in monosyllabic roots and desinences remains intact. When within a syntactic section the final nasal of a morpheme (or the nasal of a one-phoneme morpheme) gets lost, the initial plosive of the following morpheme becomes voiced. Such a voicing is compulsory for the non-aspirates, and in an intervocalic position also for the aspirates. Thus the voicing of a plosive signals that a nasal phoneme precedes. This signal, redundant when the preceding nasal is actually pronounced, becomes phonemically relevant when there is no other vestige of the nasal phoneme. This relevant signal may be transcribed as /^{n}-/: /eʀa/ 'cow' /eʀa^{n}—ʈu-/=[eʀaɖu] 'to wash the cow,' /eʀa^{n}—t'a-/=[eʀad'a-] 'to roast the cow,' /qan-ku^{n}-tox/=[qangudox] 'to the dogs,' /vi-^{n}-ʈ/=[viɖ] the nominalized form of the verb 'to go,' As a matter

of fact, it is the opposition voiced *vs.* voiceless which underlies the nasality feature in Gilyak.

Only when /^{n}-/ is preceded by a plosive, the following obstruent in the section keeps its plosiveness but does not undergo voicing: /it-^{n}—ʈif/ 'the uttered word.'

2. CONSONANTAL INTERCHANGE: ITS ROLE, LIMITS, AND ORIGIN

2.1 GILYAK PLOSIVES AND THEIR CONSTRICTIVE ALTERNANTS. Aspirated plosives (fortes) alternate with voiceless constrictives (fortes), and non-aspirated plosives (lenes) with voiced constrictives (lenes).

Diffuse acute alternants: /t'/~/r'/, /t/~/r/.
Diffuse grave alternants: /p'/~/f/, /p/~/v/.
Compact acute alternants: /ʈ'/~/s/, /ʈ/~/z/.
Compact grave alternaats: /k'/~/x/, /k/~/ɣ/.

In view of the existence of assimilated loanwords with [ka] instead of the usual Gilyak [qa], an opposition of initial mellow /k/ and strident /q/ and of their constrictive alternants /ɣ/ and /ʀ/ is to be distinguished.

2.2 CONSONANTAL ALTERNATIONS AFTER A NOMINAL STEM. A) After a nominal stem with a final vowel, semivowel, or plosive only the constrictive alternants of the initial obstruents occur: e.g., /-ku/~/-ɣu/ (plural suffix)—/kip-ɣu/ 'handles'; /vəks-/ 'to throw'—/e—vəks-/ 'to throw the comb,' /kip—vəks-/ 'to throw the handle'; /k'erqo-/ 'to fish, to angle' (one of the exceptional transitive verbs with an initial stop)—/ʈ'o—xerqo/ 'to catch a fish by angling'; /ʈ'ŋaj/ 'image'—/ʈ'o—sŋaj/ 'fish image'; /r'ə/ 'door'—/ŋo—r'ə/ 'barn door'; /kəŋ/ 'to freeze' (intransitive verb), /kəŋ—ʈoŋʀ/ 'frozen head'—/ŋə—ɣəŋ—ʈoŋʀ/ 'otter's frozen head'; /ʈ'aŋ/ 'white'—/ŋ(<ŋi—) saŋ—qan/ 'the white dog of mine'; /kəlmr'/ 'board'—/qoj—ɣəlmr'/ 'larch board'; /ra-/ 'to drink'—/ʈ'aj—ra-/ 'to drink tea.

B) After a nominal stem with a final constrictive, (1) the following nominal stem preserves the same initial obstruent that appears at the beginning of a syntactic section: e.g., /təf—ʈ'naj/ 'house image,' /təv—r'ə/ 'house

door'; (2) in any other morpheme only the plosive alternants of the initial obstruents occur: e.g., /təf-ku/ 'houses,' /təf—pəks-/ 'to leave the house.'

2.3 GRAMMATICAL ALTERNATIONS OF INITIAL CONSONANTS. At the beginning of a syntactic section a constrictive (except the dialectal, western /v/ from /w/) unambiguously signals that the given word is not an intransitive verb.

Krejnovič was the first to point out that in one and the same root the initial obstruent alternates according to the grammatical function of this root: in contradistinction to the nouns and transitive verbs with an initial plosive at the beginning of a section, transitive verbs in the same position have an initial constrictive, and often only the alternation of constrictives and plosives differentiates a transitive verb from the corresponding intransitive verb or noun, e.g., /vəks-/ 'to throw' *vs.* /pəks-/ 'to disappear'; /rəu-/ 'to teach' *vs.* /təu-/ 'to get accustomed'; /r'a-/ 'to roast' (trans.) *vs.* /t'a-/ 'to be roasted, to roast' (intrans.); /zo-/ 'to bend' (trans.) *vs.* /ţo-/ 'to bend (oneself)', (cf. /ţo/ 'curved seashore'); /fuf-/ 'to saw' *vs.* /p'uf/ 'the saw'; /r'af-/ 'to hook' *vs.* /t'af/ 'the hook'; /safq-/ 'to eat with chopsticks' *vs.* /ţ'afq/ 'chopsticks'; /xes-/ 'to tell' *vs.* /k'es/ 'information'; /fu-/ 'to extract, melt' (trans.) *vs.* /p'u-/ 'to come out, drip'; /raɣr'-/ 'to watch' *vs.* /taɣr'-/ 'opposite side,' also "a door from twigs at the edge of the water, through which a sacrifice is thrown into the sea from troughs, eyes facing the door";[39] /r'u-/ 'to trudge behind someone' *vs.* /t'u/ 'dogsledge'; /ru-/ 'to bend' *vs.* /tu/ 'joint'; /r'a-/ 'to hack' *vs.* /t'ə/ 'ice-hole' (about the variation a/ə see Krejnovič, *Fonetika*, p. 97).

2.4 CONSONANTAL ALTERNATIONS AFTER A PRONOMINAL STEM. After a nominal stem as grammatical object, the transitive verb 'to be with' appears in the form /-xrə-/∼/-k'rə-/: /ƣa-xrə-/ 'to be with an animal,' /ţxəf-k'rə-/ 'to be with a bear.' The initial consonant of the verb is somewhat modified after a preposed pronominal object: /iɣrə-/ 'to be with someone else,' /p'iɣrə-/ 'to be alone [literally: with oneself],' /uɣrə-/ 'to be with one another.' The prepositive element /p'i/ endows this and other verbs with a reflexive meaning (cf. /-xu-/∼/-k'u-/ 'to kill': /p'ix-/ (</*p'ixu-/) 'to kill oneself'); it is used also in combination with nouns: /ţxəf/ 'bear'–/p'izɣəf/ 'one's own bear.'

39. E. Krejnovič, *Sovetskaja Ètnografija*, 1934, No. 5, p. 79.

The personal pronouns /ŋi/ 'I,' /ʈ'i/ 'you (2nd Pers. Sg.),' and the corresponding plural forms are used adverbally (/ŋix-/ 'to kill me'), adnominally (/ŋizʏəf/ 'my bear'), and also autonomously (/ŋi ra-^{n}-ʈ/ 'I drink,' etc.), whereas the reflexive pronoun is mostly prepositive. The reflexive pronoun /p'i-/ was directly opposed to another prepositive pronoun /i-/～/e-/ 'someone (or something).' Cf. the South Sakhalin Gilyak pronoun /i/～/e/ 'that one, he, it' in Takahashi's vocabulary (pp. 184, 189). When preposed to the verb it signals the transitive voice and the absence of a definite object: cf. /ŋa-xu-/ 'to kill the animal,' /liʏs-k'u-/ 'to kill the wolf,' /ix-/ (</*i-xu-/) 'to kill someone.' The prepositive pronoun /u-/ 'each other' signals the reciprocal voice: cf. /ux-mu-/ 'to fight each other' (literally 'to kill each other-to die'); /iŋ-/ 'to eat something,' /uŋ-/ 'to practice cannibalism' (literally 'to eat each other'). After all the pronouns mentioned the initial consonant of the postpositive stem undergoes the same rules of alternation between plosives and constrictives as after a nominal stem: cf. /irlə-/ 'to pull something' and /ki-rlə-/ 'to pull footwear.' The prepositive pronoun (or to speak more precisely, the grammatical prepositive nominal root) is, however, more firmly and closely joined to the following stem and thus becomes a kind of prefix. Reflexes of this merger may be observed in the vowel pattern of all syntactic sections beginning with a pronoun. First, there is a tendency to drop the vowel of the pronoun or of the following morpheme, and, secondly, a manifestation of vowel harmony: the diffuse /i/ of the pronoun changes into the corresponding compact /e/ before a compact vowel; cf. /ŋi/ 'I'—allative case /ŋerx/ (</*ŋi-rox/) but /ki/ 'footwear'—allative /ki-rox/; /ŋzu-/ 'to wash me' (/zu-/ 'to wash, clean') —/ki—zu-/ 'to clean the footwear'; /ŋzif/ (</*ŋi—zif/ 'my trace' (/ʈif/ 'trace') —/ki—zif/ 'footwear track'; /ŋesŋaj/ 'my image' (/ʈ'ŋaj/ 'image')—/ki—sŋaj/ 'the footwear image.'

After a prepositive pronoun, the initial consonants of the transitive verb are treated like the internal consonants of a morpheme. In such a position a voiceless (strong) constrictive does not occur before vowels, or constrictives. It becomes voiced, both after a voiced constrictive and before a voiced constrictive or a sonorant. Cf. /ʈ'olŋi—zfə-/ 'to harness a reindeer' and /izvə-/ 'to harness (someone or something)', /ʈaqo—rxop-/ 'to touch a knife' and /erʀop-/ 'to touch (something),' /t'ə—xra-/ 'chisel an ice-hole' and /eʏra/ 'to chisel (something),' /ŋa—xrə-/ 'to be with an animal' and /iʏrə-/ 'to be with

someone', /ma—smo-/ 'to like dried fish' and /ezmo-/ 'to like (something),' /k'u—xlu-/ 'to fear a bullet' and /iɣlu-/ 'to fear (something).' A voiceless constrictive, preceded by another constrictive or by a sonorant, changes into a weak (non-aspirated) plosive: cf. /kəp—sʀa-/ 'to dislike the bird-cherry, and /esqa-/ 'to dislike (something),' /mləţ—r'if-/ 'to sit on a bench,' and /ir'p/ 'to sit (on something),' /ţ'o—sef-/ 'to spear a fish' and /esp-/ 'to spear (something)'; /eri—nr'ə-/ 'to see a river' and /intə-/=[ində], 'to see (something).'

While in the Slavic languages suffixes are tied to the preceding morpheme more closely than prefixes to the following morpheme, so that the combination of the root and suffix follows the laws of a simple word, and the combination of a prefix and root is like a compound, in Gilyak, on the contrary, the merger of a root with a prefix is closer than with a suffix, and therefore we use no hyphen to separate such pronominal prefixes from the following morpheme.

The final vowel of the prepositive pronoun

1) is retained before a cluster (e.g., /ŋizɣəf/ 'my bear,' /ŋiɣlu-/ 'to fear me');

2) becomes non-syllabic when there is no adjacent consonant (e.g., /ţez—opu-/ 'to gather twigs' and /jopu-/ (< /*i—opu-/) 'to gather (something),' West. /vopu-/ (< /wopu-/</*u—opu-/) 'to gather together'; /p'ar'k—ai-/ 'to kill a dolphin' and /jai-/ 'to kill (someone),' /vai-/ 'to fight,' literally 'to kill each other'; /k'otr—or'-/ 'to meet a bear,' /jor'-/ 'to meet (someone),' /vor'-/ 'to meet each other'; /ŋafq—alx-/ 'to open one's heart to a friend' and /jalx-/ 'to open one's heart (to someone),' /valx-/, East. /walx-/ 'to have a heart-to-heart talk,' /valɣ—lu/ 'love song' (/lu/ 'song'); /ŋivɣ—avi-/ 'to marry a Gilyak' and /javi-/ 'to marry (someone),' /vavi-/ 'to marry each other');

3) disappears in other positions (e.g., /ŋɣi/ 'my footwear.' /ŋar'-/ 'to feed me,' /p'ar'-/ 'to feed oneself,' /p'ʀa-/ 'to shoot oneself').

The pronouns of the third person /if/ in the Amur dialect and /jaŋ/ in the Sakhalin dialect are by their origin complexes with the prepositive pronoun /i-/ as their first component. These complexes figure only in the absolutive case of the 3rd person pronoun, while in cases with desinence the stem is simply/i-/ (cf. in the Amur dialect, the Instrumental /iɣir'/, the Allative /erx/, and the case of the second subject /jax/). The unsuitability of the extremely short form for autonomous use finds many analogues. It is noteworthy that also the homonymous /i/ 'river' is replaced in the Amur dialect by /eri/ (< /er—i/, probably 'running river').

2.5 THE EVOLUTION OF TRANSITIVE VERBAL FORMS. The process of the merger between the prepositive pronoun /i-/ (or /e-/) and the verb may be distinctly traced:

/*i—xlu-/ > /iɣlu-/ 'to fear something'
/*i—əs-/ > /jəs-/ 'to call someone'
/*i—həjm-/ > /jəjm-/ 'to know something'[40]
/*i—zu-/ > /zu-/ 'to wash someone or something'
/*i—lət-/ > /lət-/ 'to do something.'

The common denominator of all the Gilyak transitive verbs before this merger was the compulsory presence of a prepositive object. If the object was not explicitly named, it was expressed by the pronoun /i-/. After the merger, however, there arose the possibility of an objectless use of transitive verbs, as, for instance, /lət-/. Then /i-/ in such forms as /iɣrə-/ ceased to act as a pronominal object but was reinterpreted as a prothetic vowel which in the absolute use of the verb signaled its transitivity in contradistinction to corresponding intransitive verbs and nouns: e.g. /ivrə-/ 'to tidy'—/prə/ 'hut, tent' (cf. /p'ivrə/ 'one's own hut'); /izvi-/ "to prepare something" (a taboo expression meaning the preparation of the ritual bear dish)—/ṭvi-/ 'to be ready'; /ix-/ (< /*i—xu-/) 'to kill' (cf. /ŋa—xu-/ 'to kill an animal,' /ves—k'u-/ 'to kill a raven')—/k'u/ 'lethal weapon, arrowhead,' later 'bullet' (cf. /k'u-s/ with the instrumental suffix /-s/ 'arrow staff'); /je-/ 'to boil (something)'—/he-/ 'to be boiled'; /jur'-/ 'to follow'—/ur'-/ 'to be suitable'; /jət-/ 'to steal up, to hunt'—/ət/ 'kind of duck' (literally 'the hunted one'); /jar'-/ 'to feed'—/ar'/ 'bundle of food, share'; /jor'-/ 'to meet'—/or'/ 'flap.'

The alternation of the initial phonemes in the absolute forms of transitive and intransitive verbs is nearly compulsory in contemporary Gilyak: if the intransitive form begins with a cluster, the absolute form of the corresponding transitive verb requires, in strictly synchronic terms, a prothetic /i-/; if the intransitive form begins with a vowel, the absolute form of the corresponding transitive verb requires a prothetic /j/; if the intransitive form begins with /h/, the absolute form of the corresponding transitive verb substitutes /j/ for the /h/; if the intransitive form begins with a single plosive, the absolute form of the corresponding transitive verb requires a constrictive alternant and

40. Cf. /vətək/ 'his father' (/if/ 'he,' /ətək/ 'father') and /vaq/ 'his cap' (/haq/ 'cap').

loses the prothetic phoneme unless the vowel of the verbal root is dropped; if the intransitive form begins with a sonorant, the absolute form of the corresponding transitive verb begins with the same phoneme (e.g., /lu-/ 'to sing' and /lu/ 'song,' /ŋa-/ 'to pursue' and /ŋa/ 'animal,' /mos-/ 'to grind' and /mos/ 'porridge').

On the other hand, the thematic suffix /-u-/ is productive and widely used either as the only sign of a transitive acton (in such cases as /lərk-u-/ 'to float' and /lərk-/ 'to swim' or as a merely concomitant, auxiliary device in other cases, such as /se-u-/ 'to dry (something)' and /ʈ'e-/ 'to get dry'). This suffix, however, is far from being a constant mark of transitive verbs.

It is obvious that originally the transitivity was compulsorily expressed by the prepositive use of a definite object or of the indefinite object /i-/ 'someone or something.' This prepositive pronoun was lost when followed by one prevocalic consonant.[41] Before this loss, Gilyak had no phonemic opposition of initial plosives and constrictives. A constrictive and the homorganic plosive were two contextual variants (allophones) of the same obstruent phoneme. Originally constrictives figured only after a vowel, semi-vowel, or plosive of the same syntactic section: /t'o—r'a-/ 'to roast fish,' /xaj—r'a-/ 'to roast a pigeon,' /həjk—r'a-/ 'to roast a rabbit,' /*i—r'a/ 'to roast something' (at present, /r'a/), but /ius—t'a/ 'to roast a pike,' /qan—t'a/ 'to roast a dog,' intransitive /t'a/ 'to roast, to be roasted.'

The verbs borrowed from Gold were adapted to this Gilyak pattern; e.g., Gold /siŋgərə-/ 'to torture': Gilyak /ŋa—siŋr-u-/ 'to torture an animal, /siŋr-u-/ (< /*i—siŋr-u-/) 'to torture (someone),' /ʈxəf—ʈ'iŋr-u-/ 'to torture a bear,' /ʈ'iŋr'-/ 'to torment oneself'; Gold /sokto-/: Gilyak /ʈ'oxʈ-/ 'to get

41. *Mutatis mutandis* a similar grammatical alternation of initial plosives and constrictives, which is likewise due to a phonetic loss of original prefixes, may be observed in some other languages. The Celtic analogue is discussed in this volume by Alf Sommerfelt. Also some West Atlantic languages in Africa, particularly Biofada and Ful, present remarkable parallels to the Gilyak development: Cf. A. Klingenheben, "Die Präfixklassen des Ful," *Zeitschrift für Eingeborenen-Sprachen*, Vol. XIV (1923-24), and "Die Permutationen des Biafada und des Ful," *ibidem*, Vol. XV (1924-25). With a few minor deviations, Biafada offers the same pairs of alternants as Gilyak: t~r, p~f, b~w, č~s, k~h, and g~γ. In Ful the interchange is essentially identical: d~r, p~f, b~w, ʈ~s, ɖ~j, k~x, g~γ; only the fortis t has no constrictive alternant. According to Klingenheben, in these languages the plosive alternants of constrictives result from the phonetic influence of prefixes subsequently lost. Gilyak differs from the African patterns by confining the difference between opposite grammatical categories to the alternation of the initial phonemes, at least in a certain number of examples, whereas in Ful and Biafada, the alternation seems to be constantly accompanied by distinctive suffixes, e. g., in Ful, Personal Sg. damu-d'o 'dwarf'—Plural ramu-b'e, ʈus-d'o 'brave man'—sus-b'e, etc.

drunk'; Gold /koŋgoro-/: Gilyak /xoŋguro-/ (< /*i—xoŋguro-/) 'to roll.'

The pronoun /i-/ before the verbal stem signaled that the given verb is transitive and that it has no prepositive substantive which would designate the goal of the action. That explains Krejnovič's example (*Fonetika*, p. 61) for the different treatment of the initial verbal consonant in the constructions /xor^{n}—ţa—ŋivx/ [xor-ḍa-ŋivx], 'the man who beat Xor' and /xor za—ŋivx/ 'the man beaten by Xor,' where /za-/ (< /*i—za-/) signals that Xor is not the goal of the beating. Cf. /təv—ərp—ŋivx/ 'the man who closed (or is closing) the house' and /xor jərp-^{n}—təf/ 'the house closed by Xor'; /p'xu—ŋivx/ 'the man who killed (or is killing) himself' and /p'i iɣ-^{n}—ţ'o—ŋi-ja/ 'eat fish killed by yourself.'

2.6 Transitive Verbs with an Initial Plosive. The three exceptional Gilyak verbs which are cited by Krejnovič as having an initial plosive in their absolute form, may be easily explained: all three of them present a univerbation of original complexes "noun+verb."

1. /pota-/ 'to dry some fish'< /*poti-a/: /poti/ 'a hole picked in a fish in order to string it on a stick for drying', /-a-/ 'to dig across, to make'; the literal meaning of the complex was 'to make a hole in a fish before drying it.'

2. /kiur'-/ 'to pad footwear with grass' < /*ki—ur-/ 'to adjust footwear.'

3. /k'er'qo/ 'to fish with a hook' < /*k'e-er'q—qo-/: /k'e/ 'fishing net,' /er'q-/ 'toward,' /qo-/ 'to string, to take on a hook'; the complex literally meant 'to take on the hook for the net.'

These complexes were also used for designating the tool: /k'er'qo-s/ 'fish-hook,' /kiur'/ 'grass for padding footwear.' The composition of these three verbal complexes was no longer realized, and like many other Gilyak complexes, they changed into simple words. Subsequently they were used as transitive verbs; e.g., /ləɣi—vota-/ 'to dry salmon,' /ţ'o—xer'qo-/ 'to angle for fish' and even /ki—ɣiur'-/ 'to pad footwear with grass,' an obvious tautology from the historical point of view.

The initial stop in the absolute form proves that the use of these complexes as transitive verbs is posterior to the change of /*i—zu-/, /*i—lu-/ into /zu-/, /lu-/. Before this change the reinterpretation of /pota-/ etc. as simple transitive verbs would have given rise to such absolute forms as /*i—ɣiur'-/ and later /ɣiur'-/. The three verbs in question reveal that the constrictiveness of the initial obstruent in the absolute form of transitive verbs

is a near-constant, and this morphophonemic rule is no longer productive, whereas the constrictiveness of the initial obstruent after vowels and plosives remains compulsory: cf. /ləʔi—vota-/ 'to dry salmon,' /rʻək—vota-/ 'to dry a goby.'

The univerbation of such complexes as /kʻə-v-/ 'to chop' (literally 'to keep the axe') from /kʻə/ 'axe' and /ev-/∼/-vo-/∼/-po-/ 'to keep' must have occurred earlier, since the absolute form is /xəv-/ < /*i—xəv/.

2.7 ALTERNATION OF INITIAL OBSTRUENTS. A similar alternation of the initial plosives and constrictives may be observed in the cognate Gilyak words /taf/ (Amur /təf/) 'house' and /raf/ 'the little house erected in the cemetery for the deceased kinsman after the cremation of his body.'[42] Obviously /raf/ goes back to /*i—raf/ 'someone's house.' The indefinite pronoun replaced the name of the dead kinsman, since this name was taboo for the Gilyaks.[43]

Possibly of the same origin is the alternation of the initial plosive and constrictive in the nouns /kʻal/ 'clan' and /xəl/ 'the special ritual dish in which the meat of the killed bear is served at the bear festival.' The capture and killing of the bear is carved on this wooden dish.[44] The bear is considered as a powerful kinsman of his killers and is worshiped in order to secure the prosperity of the clan; in the life of the clan the bear festival plays an amazing role and the whole ceremony insistently stresses its connection with the clan.[45] It is tempting to surmise that /xəl/ < /*i—xəl/ 'someone's clan,' since the Gilyaks avoid naming the bear. Cf. /ŋəŋ vi-t als—pʻe-ke uzi-mi-rox ţəu—lət-ţ-ra/ 'while we were gathering berries, he (=a bear) made a noise from the heart of the forest' (Krejnovič, *Nivxskij jazyk*, p. 215).

To the roots /ta-/ or /tə-/ and /tu-/ of the demonstrative pronouns (/tə-/, /tu-/ 'this,' /taqrʻ/ 'there,' /tuŋk/ 'here,' /tuŋs/ 'as much') there are corres-

42. Cf. the description of this ritual by L. v. Schrenck, Reisen und Forschungen...,Vol. III, Part III, pp. 761–776, with a reproduction of this funeral house, and E. Krejnovič, "Roždenie i smertʼ čeloveka po vozzrenijam giljakov," *Ètnografija*, Vol. IX–X, No. 1–2 (1930), p. 107.

43. Cf. L. Šternberg, "Saxalinskie giljaki," *Ètnografičeskoe Obozrenie*, Vol. XVII, No. 2 (1893), p. 24; D. Zelenin, Tabu slov u narodov vostočnoj Evropy i severnoj Azii, Part II (Leningrad, 1930), p. 143 f.; J. G. Fraser, Aftermath (New York, 1937), p. 280 ff.; *idem*, Taboo and the Perils of the Soul (London, 1919), p. 349 ff.

44. Cf. the description of such dishes by V. Cincius in *Jazyki i pisʻmennostʼ narodov Severa*, Part III (Leningrad, 1934), pp. 184–186.

45. See A. Zolotarev, Perežitki totemizma u narodov Sibiri (Leningrad, 1934), p. 16, and L. Šternberg, Semʻja i rod u narodov Severo-vostočnoj Azii=Institut Narodov Severa, Naučno-issledovatelʻskaja Associacija, *Materialy po ètnografii*, Vol. III (1933), p. 41.

ponding roots /r'a-/ and /r'u-/ of the interrogative and indefinite pronouns (/r'a-/ 'which,' /r'aqr'/, /r'aŋk/, /r'a-in/ 'where', /r'aŋs/ 'how much,' /r'u/ 'who, what.' These interrogative and indefinite pronouns evidently originated from demonstrative pronouns with a prefixed indefinite pronoun /i-/: /r'a/ < /*i—r'a-/, etc. We would expect /t'/ as a plosive alternant of /r'/ but the usually stressless position of such pronouns in the sentence may be responsible for the loss of aspiration; cf. the lack of aspiration in the non-initial syllables. The original prefixation of /i-/ in the interrogative pronouns is corroborated by the comparison of the demonstrative pronouns /a-/ 'that,' /hə-/ 'this,' /aɣr'/ 'any more' and the interrogative pronouns /ja-ʀo-/ 'what.' /jaɣr'-/ 'what more,' /jar'/ 'why.'

Gilyak nouns designating direction and frequently occurring in adverbial use consist of two components. The first signals the direction and "up" is always expressed by a front vowel, "down" by a back vowel. The second component is /-kr'/ (after compact [wide] vowels usually /-qr'/) or /-mi/, which in separate use means 'inside, space.' The former indicates an immediately observable position, while the latter designates a more remote location, inaccessible to immediate observation. If a form ending in /-kr'/ begins with a plosive, the corresponding form in /-mi/ changes this plosive into a constrictive. Cf. /qo-qr'/ 'the bottom of the hill, seen from its top' and /ʀo-mi/ (< /*i—ʀo-mi/) 'the bottom of the hill in general'; /k'i-kr'/ 'top, location over the observer' and /xi-mi/ 'summit'; /k'e-qr'/ 'the upper part of the settlement (visible from its lower part)' and /xe-mi/ 'the upper part of a river (remote from its lower part)'; /t'a-qr'/ 'the direction from this shore to the sea or the river' and /r'a-mi/ 'the direction toward the sea or river.' Quite similarly forms with a final /-kr'/ or /-qr'/ and initial vowel or /h/ have a counterpart with a final /-mi/ and initial prevocalic /j/: /a-qr'/ 'the lower part of the settlement'—/ja-mi/ (< /*i—a-mi/) 'the lower part of a river' (cf. the names of two neighboring river villages on Sakhalin—/a—wo/ 'the lower village' and /k'e—wo/ 'the upper village'); /he-qr'/ 'this, nearest shore'—/je-mi/ (< /*i—he-mi/) 'the direction from the sea toward the shore, from a lower place toward a higher one.'

2.8 Nouns with an Initial Obstruent. In the overwhelming majority of Gilyak nominal roots the initial obstruent is a plosive. Even the initial constrictive of nouns borrowed from a Tungus language became a plosive in

Gilyak: Gold /saman/—Gilyak /ţ'am/ 'shaman,' Gold /xala/—Gilyak /k'al/= [q'al] 'clan,' etc. According to Krejnovič's sound surmise (*Fonetika*, p. 54), foreign nouns which preserved their initial constrictive in Gilyak are to be explained as later borrowings: /seta/ 'sugar,' /sikə/ 'jacket,' /xo/=[ʀ'o] 'battle,' /xaza/=[ʀ'aza] 'scissors' from Gold /seata/, /sikə/, /xo/, /xaʒa/.

As to the relatively rare native nouns with an initial constrictive, they are, in regard to the origin of this constrictive, confined to some few classes:

1) The initial constrictive results from a combination with a prepositive /i-/, e.g., /raf/, /xəl/, /ɣo-mi/; perhaps to the same class belong such kinship terms as /r'aŋq/ 'wife,' /ranr'/ 'sister,' and SE /ruvŋ/, NW /ruf/ 'brother' used, as Šternberg asserts, autonomously side by side with the forms /tuvŋ/, /tuf/, etc. (*Sem'ja*, pp. 68 f., 74 f.): as a rule such terms required an adnominal object answering the question, 'whose relative is meant?' and the general concept was expressed with the help of an indefinite pronominal object; e.g., /*i—ranr'/ 'someone's sister.'

2) The initial constrictive is used by nouns of onomatopoetic origin: /ral/ 'frog' (cf. Lat. *rana* "ab sua dicta voce"), /xaj/=[ʀ'aj] 'pigeon,' /zaq/ 'tomtit'; onomatopoetic names of birds are quite usual in Gilyak: cf. /qar'/ 'raven, /auŋk/ 'kind of duck,' /kex/ 'gull,' /kəxkəx/ 'swan,' /ţaxţax/ 'starling,' /teoteo/ 'snipe,' /tutut/ 'turtle dove,' /tarkraʀ'/ 'capercailzie.'

3) In NW Gilyak /w/ > /v/ and the initial /v/ of some nouns, intransitive verbs, and suffixes reflects the original /w/ preserved in the Sakhalin dialect: cf. NW /vo/, SE /wo/ 'village'; NW /vət/, SE /wat/ 'iron.'

4) In some nouns the constrictive, at present initial, seems to have been originally preceded by a plosive, later lost; it is probable that /r'ə/ 'door' < /*k'r'ə/, cf. Grube, p. 18, *ńäx-ktö* 'Augen-Thür=Augenlid'; perhaps /rə/ 'ice' < /*k'rə/, cf. the corresponding transitive verb /—xra-/~/—k'ra-/ 'to chisel (ice).'

5) The initial constrictive is preserved in nouns which were substantivized forms of transitive verbs, e.g., NW /xav-ţ/ [ʀ'avḑ], SE /xavnt/ 'snowstorm' from the transitive verb /xaf-/ 'to sweep on snow,' cf. SE /k'avi/ 'snow.' The relationship between these two nouns is the same as between SE /ŋavnt/ 'scrotum' from the verb /ŋaf-/ 'to envelop,' and /ŋavi/ 'package.'

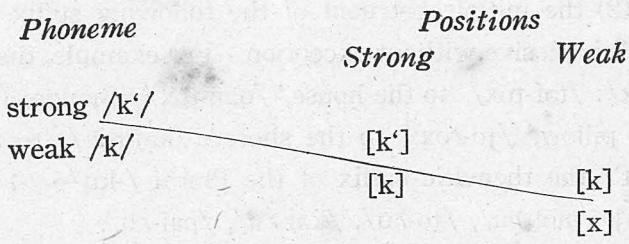
2.9 Early Stages of the Gilyak Consonantal Pattern. The conclusion suggests itself: originally the initial obstruent of a word, whether verb or

noun, was a plosive. Within a syntactic section the plosive changed into a constrictive after the final vowel or plosive of the preceding morpheme. Krejnovič attempted to deduce both variants, the plosive and the constrictive, from an original affricate, but this arbitrary assumption is contradicted by linguistic experience: the appearance of affricates in a phonemic pattern implies the presence of both stops and constrictives, while the presence of stops is a universal and implies neither affricates nor constrictives.[46]

At present the non-initial obstruents of a Gilyak morpheme are divided into plosive and constrictive phonemes, whereas the initial obstruents, both plosives and constrictives, in addition, appear in two phonemically distinct varieties—strong and weak: the strong and weak plosives are opposed to each other as aspirated fortes *vs.* non-aspirated lenes, and the strong and weak constrictives as voiceless fortes *vs.* voiced lenes. Before the rise of a phonemic distinction between initial plosives and constrictives (/ţosq-/ 'to be broken' *vs.* /zosq-/ trans. 'to break'), the difference between initial plosives and constrictives was a contextual (combinatory, allophonic) variation, cf. /ţ'o/ 'fish'—/tu—so/ 'lake fish,' while the difference between initial fortes and lenes was a phonemic distinction, cf. /ţ'o/ 'fish'—/ţo/ 'shore' and /tu—so/ 'lake fish'—/tu—zo/ 'lake shore.' Inversely, the difference between non-initial plosives and constrictives in a morpheme was phonemic, e.g., /pək/ 'cuckoo'—/pəx/ 'color,' while in this position there is no phonemic distinction between fortes and lenes: the difference between non-aspirated and aspirated plosives or between voiced and voiceless constrictives is contextual; cf. the Absolutive case /pəx/ and the Allative /pəx-tox/ with the Ablative /pəɣ-ux/.

Briefly, within a Gilyak root, the obstruents were differently treated in the initial, strong position and the non-initial, weak position. In each of these positions, two varieties of obstruents, a stronger and a weaker one, were phonemically distinguished. Quite similarly the Danish consonantal system distinguishes the strong and weak position in the word, and furthermore, the stronger and weaker variety of obstruents in either position, and implements all these categories in the same way as Gilyak did. Both in modern Danish and in old Gilyak the weak obstruents in the strong position are implemented like strong obstruents in the weak position.[47]

46. Cf. R. Jakobson, "Typological Studies and Their Contribution to Historical Comparative Linguistics," *Reports for the Eighth International Congress of Linguists*, Oslo, 5–9 August 1957, Supplement.
47. Cf. R. Jakobson, C. G. M. Fant, M. Halle, Preliminaries to Speech Analysis (Massachusetts Institute of Technology, 1952), p. 5 f.



The historical analysis of the Gilyak consonantal pattern has revealed the late provenance of the phonemic distinction "plosive *vs.* constrictive" in the strong position, and the question arises whether this distinction should not be considered a secondary acquisition also in the weak position. Could it not be assumed that originally the difference between plosives and constrictives was a mere allophonic variation also for the non-initial obstruents. Such dialectal oscillations as /ŋeṭ/~/ŋes/ 'a plank,' /ətki-la/~/ərki-la/ 'fair wind,' /aṭik/~/asik/ or /əṭik/~/əsik/ 'grandmother' could be cited.

Since there occur frequent changes of complexes into indecomposable words (cf., for example, /mxos/ 'ten fish' from /mxo-ṭ'o/), one could venture to explain the different treatment of obstruents in such instances as /lət-/ 'to do' and /lər-/ 'to follow along' by deriving the latter form /*lə-ru-/. But in many cases there are no clues which would enable us to suspect an original complex; cf., for example, /paq-/ 'short'-/paʀ-/ 'red,' /nok-/ 'to be narrow'-/nox-/ 'to smell,' /jat-/ 'to skin'-/jar'-/ 'to feed,' /jot-/ 'to sew'-/jor'-/ 'to meet,' /ŋat-/ 'to measure'-/ŋar'-/ 'to equal.' Therefore the past of the Gilyak consonantal pattern, anterior to the "Danish" stage, remains for the time being beyond our knowledge.

2.10 The Initial Obstruent of Suffixes and the Difference between the Postverbal and Postnominal Positions. Like the internal obstruents of all Gilyak morphemes, the initial obstruents of suffixes present no phonemic distinction between fortes and lenes. Such instances as /t'xə/~/r'xə/ 'surface,' although mostly postposed to nominal roots and signifying 'above, on,' are nonetheless autonomous nouns.

If within a syntactic section a nominal thematic morpheme ends in a stop, vowel, or liquid, then the initial obstruent of the following morpheme (whether root or suffix and whether nominal or verbal) is always constrictive. If within a syntactic section a nominal thematic morpheme ends in a constrictive or nasal, then (1) the initial obstruent of the following root (whether nominal or verbal) is plosive with a few exceptions and was formerly plosive without

exceptions; (2) the initial obstruent of the following suffix (whether thematic or desinential) is plosive without exception. For example, the Allative desinence /-tox/∼/-rox/: /təf-tox/ 'to the house,' /qan-tox/=[qandox] 'to the dog,' /mot-rox/ 'to the pillow,' /ʈo-rox/ 'to the shore,' /kəj-rox/ 'to the sail,' /pal-rox/ 'to the forest'; the thematic suffix of the Plural /-ku/∼/-ɤu/: /təf-ku/, /qan-ku/=[qan-gu], /mot-ɤu/, /ʈo-ɤu/, /kəj-ɤu/, /pal-ɤu/.

Whatever the final phoneme of a verbal thematic morpheme, the initial obstruents of the following morpheme (whether root or suffix and whether nominal or verbal) present a phonemic distinction of plosives and constrictives. Thus in predicative verbal forms the suffix /-ta/ is used for the Plural and 1st Pers. Sg., and /-ra/ for the 2nd and 3rd Pers. Sg.: cf. /ra-ta/ and /ra-ra/ from /ra-/ 'to drink.' But as soon as the same predicative suffix is preceded by a nominal morpheme, the alternation of the initial plosive and constrictive becomes automatic: /mxo—mu/ 'ten boats' /mxo—mu-ra/ 'it's ten boats,' /ʈʻi-ra/ 'it's you (2nd Pers. Sg.),' /sək-ra/ 'it's all'; /if iɤlu-^{n}-ʈ-ra/=[if iɤluɖra] 'he is the frightened one' (the thematic suffix /ʈ/ is a substantivizer of verbal stems); /otʀ-ta/ 'it's muck'; /iv-^{n}-ta enŋaz-^{n}-ʈ/=[ivda enŋazɖ] 'it's he who stole,' /nosk ur-la-^{n}-kan-ta/=[nosk urlaganda] 'Nosk is a good dog.' The suffix /-ke/ signaling simultaneity always has a plosive after verbal stems, but displays the alternation /-ke/∼/-ɤe/ after nominal and pronominal stems, according to their final phoneme. The thematic suffixes of deverbative nouns—the instrumental or modal suffix /-s/ and the locative suffix /-f/ are constrictive independently of the final phoneme of the verbal root: /puʈi-s/ 'broom,' /təʈ-s/ 'scraper,' /ʈʻev-s/ 'spit,' /kʻuv-s/ 'hoop,' /ver-s/ 'width,' /kal-s/ 'length,' /tan-s/ 'cutting,' /uɲɤur—ɲu-s/ 'the tool to look at the shadows=mirror'; /pʻət-f/ 'place of splintering, a cleft,' /kʻər-f/ 'place for traveling, haul,' /lər-f/ 'place to walk along=bank of a stream,' /muɤv-ət-f/ 'the place where the day is caught=noon.'[48] The suffix /-f/ is possibly related to the verbal morpheme /fi-/∼

48. Cf. also /xa-/∼/-kʻa-/ 'to shoot' and /kʻas/ 'shaman's drum,' literally 'shooting tool, bow.' The names of the bow and its parts are often used to designate the shaman's drum and its components; "the shaman when praying points his drum, like a bow, at the evil spirits"; the roles of the drum and of the bow in shaman performances are interchangeable; and some ethnographers even assume that the drum was substituted for the original bow (see particularly L. Potapov, "Luk i strela v shamanstve u altajcev," *Sovetskaja Ètnografija*, 1934, No. 3, p. 64 ff.; cf. E. Emsheimer, "Zur Ideologie der lappischen Zaubertrommel," *Ethnos*, 1944, No. 3-4. The present Gilyak name /puŋ-ʈ/=[puŋɖ] 'bow' is apparently related to the root /vuŋ-/ which we find in the reduplicated nominalized form *vungvunt* "aufspannen," noted by Grube, p. 106. The name /puŋ-ʈ/ 'the bent one,' with an assimilation of /ŋ/ to /ʈ/ seems to substitute the tabooed name of the bow: the name of a weapon is usually taboo, and Gilyak very frequently resorts to the nominalized form of a verb to replace the prohibited noun.

/p'i-/ 'to reside.'

Some suffixes, however, are separated from the preceding verbal morpheme by a special nasal suffix and, in this case, the initial obstruent of the subsequent suffix is always a plosive and, like all Gilyak plosives after a nasal, voiced. In the Amur dialect the nasal consonant itself is omitted in this position and only the voicing of the following plosive signals the presence of a nasal phoneme: /ra-^{n}-ku-/=[ragu] 'to make someone drink,' /ra-^{n}-kin/ 'in spite of drinking,' /ra-^{n}-par/=[rabar] 'drank,' /ra-^{n}-ta/=[rada] 'let's drink,' /ra-^{n}-tox/=[radox] 'as concerns drinking,' /ra-^{n}-ṭ/=[raḍ] 'drinking'—the nominalized verbal form.

Since a verbal thematic morpheme always requires a postpositive morpheme, the junction between them is closer than that between the nominal thematic morpheme (potentially final) and the postpositive morpheme. Therefore after a verbal root or suffix the initial obstruent, similarly to the non-initial obstruents within any kind of morpheme, presents a phonemic distinction between plosiveness and constrictiveness, whereas after a nominal morpheme, this distinction is restricted at the beginning of roots and completely canceled at the beginning of suffixes.[49]

49. This study, begun in Besserud, Norway, was first discussed in Alf Sommerfelt's seminar during the winter of 1939–40. The discussion was resumed and the study completed in Skeikampen, Norway, August 1957. Thanks for assistance are due to Ella Pacaluyko and John Fred Beebe. My further Gilyak studies are to examine the morphophonemic laws of reduplication, the vocalic alternations (wide~narrow and vowel~zero) with regard to the make-up of the numerals, the petrified complexes in the vocabulary as clues to the earlier structure of Gilyak, and the present phonemic and grammatical pattern.