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Syntax and Cognition

Towards a Cognitive Typology of
Attention Information Flow (AIF) 'templates' in Udi narratives

1. Worlds and Cognition

Cognitive approaches to language that are related to Radical Constructivism generally assume that linguistic structures are conditioned by a causal chain that goes far beyond the horizon of overt linguistic features and paradigms. Crucially, such approaches have to start with the hypothesis that there in fact is no true 'starting point' in this chain, which entails both aspects of a *causa efficiens* and of a *causa finalis*. Rather, we should describe different 'horizons of motivation' which are grounded in the general interactional ontology of cognition: By this I mean that the phylogenetically conditioned and ontogenetically reinforced dynamic structure of cognition is based on the vital functions of the well-known Perception Action Cycle, compare (1):

- (1) „(...) directed behaviors of animals comprise continuous cyclic relations between the detection of information and the performatory and exploratory activities that serve, in significant part, to facilitate that detection and which, in turn, are guided and shaped by it“. (Swenson & Turvey 1991:319 - Perception-Action Cycle).

Accordingly, the dynamic structure of Cognition emerges from three basic features:

- (2) Energy
Experience
Communication

Note that we have to treat these three features as representing a dynamic gestalt with by itself recursive properties. For instance, Experience entails Communication, and Energy both presupposes and guarantees Experience and Communication. In this sense, we can reformulate (2) as follows:

- (3) The ontology of Cognition is marked by Cognition centered, energetic processes of World-Cognition Communication resulting in Experience to safeguard the energetic process (and hence cognition) itself.

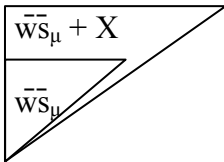
Naturally, this description strongly oversimplifies the matter. Here, I cannot elaborate the claim made in (3), which – by itself – has to be read in terms of both phylogenetic and ontogenetic parameters. Nevertheless, it is important to stress that the three features mentioned in (2) entail further aspects that are related to the senso-motoric grounding of both Experience and Communication. For instance, it is a standard hypothesis that Experience is strongly grounded in vision, although we also have to take into account the other sensoric domains, especially the auditive and tactile domains.

Crucially, the recursive nature of the Perception Action Cycle conditions that interactional Experience becomes entrenched and develops into a storage-based strategy to communicate with the world. Quite in accordance with the Zipfian law, storage- or memory-based interaction importantly contributes to the reduction of energetic efforts, which again conditions a reduction of the actual ‘attention’ towards a world stimulus: A new stimulus is thus not experienced by itself, but always in terms of memory recursion. This observation that is related to the well-known Menon Paradoxon can be summarized as follows:

- (4) The *actual* construing reaction upon a World Stimulus (WS) ($\Rightarrow \bar{w}\bar{s}_\alpha$) happens in activating ‘analogies’ (*mirroring*) of $\bar{w}\bar{s}$ stored in memory (μ) ($\Rightarrow \bar{w}\bar{s}_\mu$).

The reduction of experiential attention towards an actual World Stimulus becomes even more apparent, if we include the feature of communication: Here, the individual Cognition has to take into account the fact that the communicative reaction upon an actual World Stimulus can only be successful (in the sense of the Perception Action Cycle), if it refers to an adequate, memory stored experience of the interacting cognition. In other words: The communication-based reaction upon a World Stimulus is marked for attentional features that rely on the hypothesis of shared knowledge and shared attentional strategies.

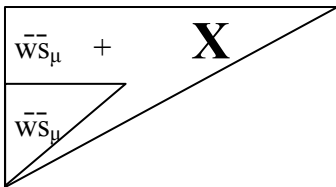
The assumption made in (4) also illustrates a functional asymmetry between stored and actual experience. According to the frame work underlying the present analysis, this asymmetry can be formalized as follows:

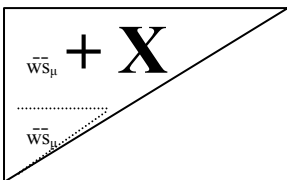
(5)  $\Rightarrow \bar{w}\bar{s}_\alpha$

This formula says that the actual reaction upon a World Stimulus takes place in terms of an inflated version of the corresponding stored reactional scheme. The inflation process represents the basically metaphorical nature of cognitive processes. It can be summarized in the following dictum:

- (6) The Present is a Metaphor of the Past

The stronger the asymmetry between stored experience and actual reaction becomes, the more the actual reaction acquires idiosyncratic properties, or the more dissimilar it becomes to the stored reactional type, compare the two variants in (7) and (8):

(7)  $\Rightarrow \bar{w}\bar{s}_\alpha$

(8)  $\Rightarrow \bar{w}\bar{s}_\alpha$

Obviously, the degree of asymmetry between stored experience and the actual construing reaction upon a World Stimulus depends from both inherent properties of the communicated World Stimulus and conventions. In other words: The degree to which an individual cognition introduces idiosyncratic or 'new' elements in communicating a World Stimulus is also governed by collective routines entrenched during language acquisition and language practice. This aspects adds the feature of habitualization and hence diachrony to the complex of attentional attitude towards a World Stimulus.

Habitualization also paly an crucial role in the degree to which a given World Stimulus seems communicable to an individual cognition. From a linguistic point of view, a World Stimulus is processed in the following way:

- (9) A World Stimulus is communicatively reacted upon in terms of a recursion that relates the gestalt of the given World Stimulus to both stored analogies of experiencing the World Stimulus and constructional patterns that have emerged from the communication of these stored analogies.

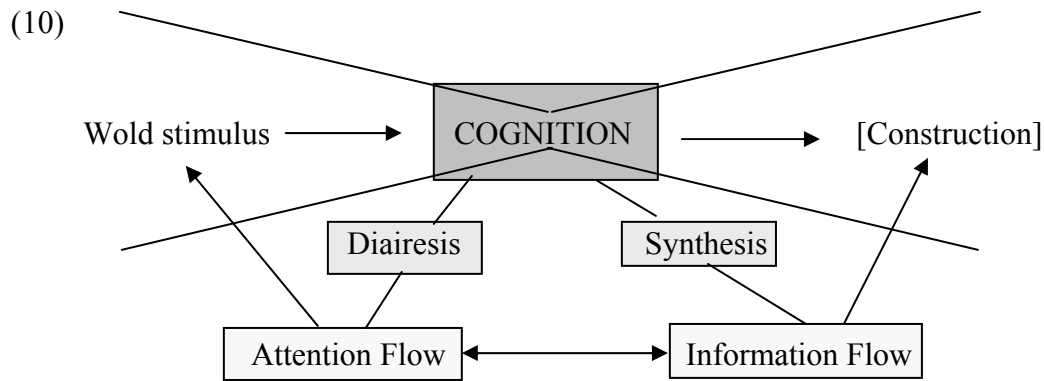
The asymmetry mentioned in (5) above can find its linguistic expression at different layers. From the point of view of Cognitive Typology as elaborated in the frame work of a Grammar of Scenes and Scenarios, the lexical domain represents the most variable tool to process differences between a stored reactional pattern and the actual reaction. On the other hand, both syntax and linear phonology seem to show the highest degree of entrenchment which thus show up as invariant segments in the communication of a World Stimulus.

Reconstructing the knowledge system of linguistic practice hence best starts with those components that entail a high degree of invariance. In the second part of my paper, I relate this approach to the question of syntactic organization. After a brief consideration of the underlying concept of 'Pragmasyntax', I will present the results of a corresponding analysis that I have carried out for Udi, a marginal Lezgian language in the Eastern Caucasus.

2. Pragmasyntax

As it has been said above, the concept of 'Pragmasyntax' is grounded in the GSS framework. It refers to the routinization of clausal architecture with respect to the organization of information relevant features. Accordingly, Pragmasyntax describes those structural parts of an utterance *gestalt* that are related to information processing (in its broadest sense). GSS argues that the architecture of information 'templates' as expressed in utterances represent a major aspect of the paradigmaticization of linguistic knowledge. Therefore, it seems plausible to start with aspects of Pragmasyntax to reconstruct this knowledge type. Among the many features that are relevant for the organization of the information 'content' of an utterance, the following aspects are relevant in the given context:

The syntactic organization of sentences / clauses according to the Attention Information Flow (AIF): The AIF can be defined as the paradigmatic architecture to linguistically construe a stimulus input or World stimulus (experiential, memory-based or verbal). The Attention Flow represents the process of qualifying and segmenting an input event according to (sensation based and habitualized (or: entrenched)) cognitive patterns ('diariesis' in terms of GSS). Here, Information Flow is defined as the process of constructing a linguistic 'event-image' in terms of a presentational simulation of the stimulus input in accordance with the linguistic knowledge of a speaker. The following schema gives a rudimentary picture of the AIF:



The AIF is grounded in the so-called Phrasal Information Space (PhIS). Roughly speaking, a PhIS can be equaled to a sentence-like utterance. It is marked for the ensemble of information units that produce the *gestalt* of the utterance in correlation with the experienced *gestalt* of the World stimulus. Usually, the PhIS is organized according to standard templates or constructional patterns (that not necessarily have a symbolic value by themselves). It contains - among others - information about the *gestalt* experience of a World stimulus, its salient features as they become apparent in the actance topology of an utterance, its relation to individual and collective discourse and world knowledge, the activation mode of the relevant memory base (assertive, modal etc.), and the degree of involvement and commitment of the speaker. (11) lists some basic features of the linguistics of PhIS:

(11) Linguistic Factors of the AIF (= PhIS Topology) [selection]

- ✧ Linearization > Word Order
- ✧ Commitment: Pathic organization (sympathic < antipathic)
- ✧ Figure-Ground-Metaphorization / Assessment of actancy
- ✧ Assessment of Inference > phoric type ~ Masking routines

Note that again we have to start with a mutually depending complex of cognitive experiential routines. Most of the PhIS templates are activated on a 'poietic' basis: By this is meant that a major part of the linguistic knowledge and practice of a speaker is normally inaccessible to manipulation. It represents tacit albeit not 'unconscious' knowledge and is opposed to 'pragmatic' dimensions that refer to that part of the linguistic knowledge that can be used to manipulate, refine, or reduce the patterns of the AIF and the structure of the PhIS. Such pragmatic processes are termed 'Pragmatic Intervention' in GSS.

From a linguistic point of view, much of what can be subsumed under the label 'Pragmasyntax' is expressed by positional and relational strategies. In addition, the referential (or: semantic) quality of the 'actance topology' (that is the 'scene of actants' in a PhIS) plays an important role in a pragmasyntactic typology. Before turning to the internal properties of a Phrasal Information Space, it should be noted that the way external 'World stimuli' are constructed by cognition as processable information units depends from a great number of parameters. As I have said above, most of them are coupled with cognitive routines related to the Perception Action Cycle and with entrenched schemas, basic level concepts, idealized cognitive models etc. resulting from the PAC. In addition, the 'Inner World/Outer World' interface (to put it into popular albeit problematic terms) is marked by structural Mirror Schemas that are scaled along the well-known constructional parameters 'icon, symbol, and symptom': Some parts of the constructional 'model' to communicatively react upon a World stimulus copy substantial or structural properties of the stimulus (icons) whereas other parts prefer either a symbolized reaction (symbols) or an inferential strategy (symptoms).

Symbolized reactions usually result from different types of metaphorical mapping (in its broadest sense) and establish a growing ‘distance’ from iconic reactions. Finally, symptomatic reaction schemas presuppose the ‘existence’ of iconic/symbolic constructional reactions upon a stimulus.

It should be noted that according to this framework, there is no principal difference between the ‘substantial’ representation of reaction schemas (in terms of articulatory schemas) and a ‘structural’ representation (in terms of entrenched models of relational properties). In other words: A ‘structural’ representation can likewise mirror the complexity of a World stimulus in terms of iconic reactions, symbolization (plus metaphorization), or symptom related hypotheses. Following standard assumptions in language typology, it can be claimed that the opposition ‘substance’ vs. ‘structure’ represents nothing but the two poles of a experiential (and constructional) scale that is organized according to the two features ‘degree of articulation entrenchment’ and ‘quantity of gestalt properties’: Accordingly, a ‘structure’ is characterized by a relatively high degree of *gestaltschärfe* but is associated with fewer articulatory specifications (basically prosodic). On the other hand, ‘substance’ is often less pronounced for its gestalt properties, but is more explicit with respect to its articulatory routines. Relational morphology is then seen as being located ‘in-between’ the two poles: It shares its representational domain with ‘structures’, but shares its ‘articulatory’ routines with ‘substance’.

As has been said above, the framework underlying the present analysis (‘Grammar of Scenes and Scenarios’ (GSS)) hypothesizes that the linguistic knowledge of a speaker results from the entrenched paradigmaticization of communicative experience. Accordingly, linguistic knowledge cannot be described in terms of standard linguistic paradigms as long as the speaker has not acquired a language with the help of such meta-linguistic descriptors. Many such descriptors are nothing but heuristic approaches to language structure that may be valid from a systematic point of view, that however are rarely to be retrieved from individual linguistic practice. A way out of this problem is to assume that much of what a speaker does when speaking is based on tacit knowledge: In this sense, linguistic categorization is seen as a ‘real’ mode of information processing normally not accessible to standard speakers. However, it can likewise be assumed that linguistic knowledge is partially recoverable by speakers, especially when specifying idiosyncratic reactional types or when manipulating the standard way of communicatively reacting upon a World stimulus. It is this second perspective that is taken in the present paper. Therefore, it is hypothesized that a major goal of the usage-based modeling of language is to reconstruct the ‘real’ linguistic knowledge of a speaker as it shows up in language production, but not in paradigms set up for heuristic purposes.

Usage-based models of language are usually related to corpus linguistics (in its broadest sense). Accordingly, the process of entrenchment is thought to be correlated with the degree to which experience is reiterated (in a more or less similar way) and with the degree to which the processing of this experience takes place in similar ‘ways’. Naturally, frequency can never serve as an argument *per se* for entrenchment, because frequency heavily depends on the *gestalt* properties of the World stimulus that is processed. Frequency thus shows up as an effect rather than as a condition: Basically, an entity is frequent only if it includes some kind of ‘salient’ value. Nevertheless, frequency can by itself emerge as a specific value: An entity is likely to be processed with an index mark ‘frequent’, if it is frequently experienced, regardless whether the inherent properties justify its frequent use or not.

If we apply these considerations to the concept of ‘Pragmasyntax’, we can assume that frequency plays a crucial role with respect to the question, which domains are more strongly

entrenched and hence more ‘grammatical’ than others. The pragmasyntactic organization of an utterance heavily depends on whether or not both the speaker and the hearer are ‘used’ to its information structure or not. In order to reconstruct the linguistic knowledge of a speaker as documented in text production, it hence seems reasonable to refer to the most frequent structural types.

3. The Pragmasyntax of Udi narratives

As has been said above, Syntax is grounded in the entrenchment of strategies to communicatively react upon complex World Stimuli. Basically, Syntax guarantees the linearization of properties of a World Stimulus that are indexed as ‘communicatively salient’ during the experience of the Stimulus. In other words: Syntax transforms a multidimensional gestalt or a sequence of gestalts into a more or less explicit linear sequence of utterable features. Syntax thus entails both structural and substantial properties that are distributed in accordance with the entrenched linguistic practice of a speaker. The transformation of a multidimensional gestalt into a linearized sequence naturally conditions a contortion of the original gestalt. Instead, the linearized sequence gains gestalt properties of its own that are entrenched as constructional ‘templates’ and associated with more or less explicit functional values.

In the present paper, I cannot elaborate the whole universe of syntactic gestalts. I will confine myself to some of those features that show up the analysis of two short texts from Udi. Udi is a moderate agglutinating language marked by a strong morphopragmatic component. (11) lists some of the typological features of the language:

(12) **Referential Domain**

Case system: Abs, Erg, Ben, Gen, Dat, Locatives)
 Number: Singular vs. Plural (vs. Collectives))
 Referentialization: Overt; Conversion
 Overt Definiteness (O, case) / Indefiniteness (numeral ‘one’)
 Communicative Reference: 2/2
 Anaphoric Reference: Deictic; Reflexive
 Deictic Reference: Prox vs. Med vs. Dist (monocentric)
 Qualification (Attributes): Unmarked
 Echoes: Floating Focus Clitic (Personal, Bipolar), S=A; demoted S, demoted A;
 Localization: Case, Postpositions

Relational Domain:

Tense: Tripartite (Past\diamondPres\diamondFut)
 Mood: Epistemic < Deontic
 Valence: Causative, Anticausative, Mediopassive, ‘Expressive’
 Subordination: Participles, Converbs
 Localization: Preverbs (petrified)
 Referentialization: Masdars
 Relational derivation: Incorporation (Light Verbs)
 Copula: a) Overt; b) usurped (AGR-clitics)
 Serialization: TM, Aspect, Aktionsart

Constructional Patterns

Relational Primitives (RP): S(ubjective); A(gentive); O(bjective)
 Case: Ergative (Nouns), Tripartite (Deictic Pron.), Accusative (Pers. Pron.)
 Agreement: Accusative (echoes)
 IO-Domain: Clustered with O
 Demotion/Promotion Types:
 Split-S (Abs > Dat) [sensation verbs] [Vartashen]

Fluid-S (Abs > Erg) [emphasis, control]
 Split-A (Erg > Dat) [verba sentiendi] [Vartashen]
 Fluid-A (Erg > Dat) [Potential; restricted] [Vartashen]
 Fluid-O (Abs > Dat) [Indef/def]
 Possessive: Case based (genitive)
 Reflexive: (Pro)Nominal
 LD vs. SD [partial]
 Trigger: EMPATHY < SALIENT < S=A
 Word order:
 Clausal: S=A- {IO-} O-V ~ S=A-V- {IO-} O
 NP Internal: AttrN; GenN (~ NGen:Ref)

Focal Strategies

Standard Focus: Overt (Floating Agreement Clitics, FAC): Bipolar
 Constituent vs. Verbal (Event) Focus
 Natural Focus: Q, NEG, ADH, HYP
 Constraint: Event-Focus with Factitive Future, Modal
 Additive Focus: Overt (enclitic)
 Contrastive Focus: Overt (enclitic)
 Possession Focus: Possessor vs. Possesum Focus (Overt: Case / FAC)
 Positional Focus: Unmarked: Preverbal Focus Field;
 Marked: Clause Initial, Clause Final

Junction

Coordination: a) Overt (particles); b) Juxtaposition
 Subordination
 SS: Participles, Converbs, Relative Clauses, Masdars
 DS: Converbs (relational case frame)
 Masdar (referential case frame)
 Position: SUB:SS:REL (overt): Head – REL
 SUB:SS – MATRIX
 SUB:DS – MATRIX ~ MATRIX – SUB:DS

The two texts under consideration stem from different dialects and are of different age, see the overview in (13) Nevertheless, they seem comparable because they represent the ‘typical’ style of Udi narratives. Both texts are of nearly equal length. They do not refer to historical events or to other types of idiosyncratic events, but have anecdotic character. The overall architecture roughly corresponds to the standard scheme that has the positive protagonist being involved in a ‘dramatic’ event from which (s)he escapes under guidance of a helper (see PROPP 1928). But whereas K&S reflects a more traditional ‘sujet’ (a king being confronted with a lower-class personage), the plot in WS is embedded into the ‘everyday life’ of the speech community. In other words: WS is more ‘situational’ than K&S. The following table informs about the general properties of the two texts (see the appendix for the two texts):

(13)	K&S	WS
Name	King & Shepherd (<i>Pačšağq'an naxrči</i>)	Walking Sieve (<i>Tarak'ala xaxal</i>)
Source	Dirr 1904:84-6	Keçaari 2001:125-6
Date	~ 1900	~ 2000
Dialect	Vartashen	Nizh
Type	Native (Oral)	Native (Oral)
Seize (Tokens)	271	275
Seize (Types)	169	230
Redundancy Rate (Type /. Token) (Max = 0, Min = 1)	0.62	0.84
Textual Units ('Paragraphs')	40	47
Numbers of PhIS	70	79

Number of Matrix Clauses	59	56
Number of Subordinations	11	23
Words per PhIS (WpPhIS)	3.87	3.48
Complexity rate (SUB per MATRIX) (Max = 1, Min = 0)	0.19	0.41
Bound Morphology	336	398
Morphemes per Word (MpW)	1.24	1.45
Morphemes per PhIS (MpPhIS)	4.80	5.57
Tense Frame	Past (~ Present)	Past
Overt Local Frames	20	20

Here, I cannot comment upon all features listed in (13). But it should be noted that the Nizh text (*Walking Sieve*) is marked for a greater redundancy rate with respect to the distribution of lexical types and lexical tokens. This fact can be correlated to the above mentioned degree of memory recursion: The Nizh text obviously relies on already uttered forms much more than the Vartashen text. This aspect goes together with a higher complexity rate of the Nizh text: accordingly, nearly every second matrix clause is marked for background information given in a joint subordination. In the Vartashen text, such background information is rarely given at all.

The overall hypothesis put forward in the present analysis concerns the claim that Udi has undergone a ‘modernization’ process that can be related to the impact of Western communicative styles (handed over to the Udi communities via Russian and Azeri). (14) lists some of the relevant hypotheses:

- (14) ✧ Since the last 100 years, Udi has undergone a process of ‘modernization’ (adaptation of a Western communicative style, here via Azeri and Russian)
- ✧ Modernization has resulted in a greater communicative variance.
 - ✧ Reduction of and changes in the traditional pragmasyntactic patterns.
 - ✧ Stronger presence of factors related to Pragmatic Intervention (PI)
 - ✧ Reduction of referential explicitness
 - ✧ Implementation of stronger inferential strategies
 - ✧ Process has not yet reached a state that would render older variants of Udi linguistic knowledge and practice obsolete.

In this sense, it can be argued that the Nizh narrative is more ‘modern’ than the Vartashen one, including a higher degree of communicative variance, a lower degree of ‘straightforwardness’, and - in more general terms - a slightly lower degree of using traditional pragmasyntactic patterns. From this we can infer that the linguistic knowledge of an average Nizh speaker today has changed in a way that renders older stories less parsable than say fifty years ago. However, dialect differences and preferences also play an important role in order to account for the differences between the two texts. On the other hand, it can also be shown that the two stages of Udi as documented by the texts are marked for a number of common features. This again illustrates that the process of modernization has not yet reached a dimension that would allow speaking of two different linguistic knowledge systems.

In the present section, I will put forward some arguments in favor of these hypotheses. Nevertheless, the audience should not expect to arrive at a complete picture of the matter: It has to be born in mind that the following typology is selective and not nearly as representative. It does not take into account diastatic features as they may have shown up in the ‘style’ of the original narrators. In addition, the analysis depends from the type of texts

under consideration: It may well be that other types (including dialogs, longer narratives, songs etc.) will bring us to (slightly) different conclusions. The method applied in the present study simply starts with the hypothesis that differences become best observable if we take data from ‘the extremes’ rather than considering material of very close provenience. Nevertheless the data should be comparable (and should thus be marked for a *tertium comparationis*): It makes little sense to compare, say, Vartashen Udi religious songs of the early 19th century to news-style reports from modern Nizh.

3.1 Basic topology

The basic information structure of a text can (among others) be related to the following structural domains: Intrada (or ‘Intro’), general background information (referring to general scripts), frame settings, and a series of actual stances that are marked for referential tracking (continuous and switch). In addition, quotations may break up the information flow and create a narrative layer *within* the narrative itself. The two series at issue reflect this basic layer as follows:

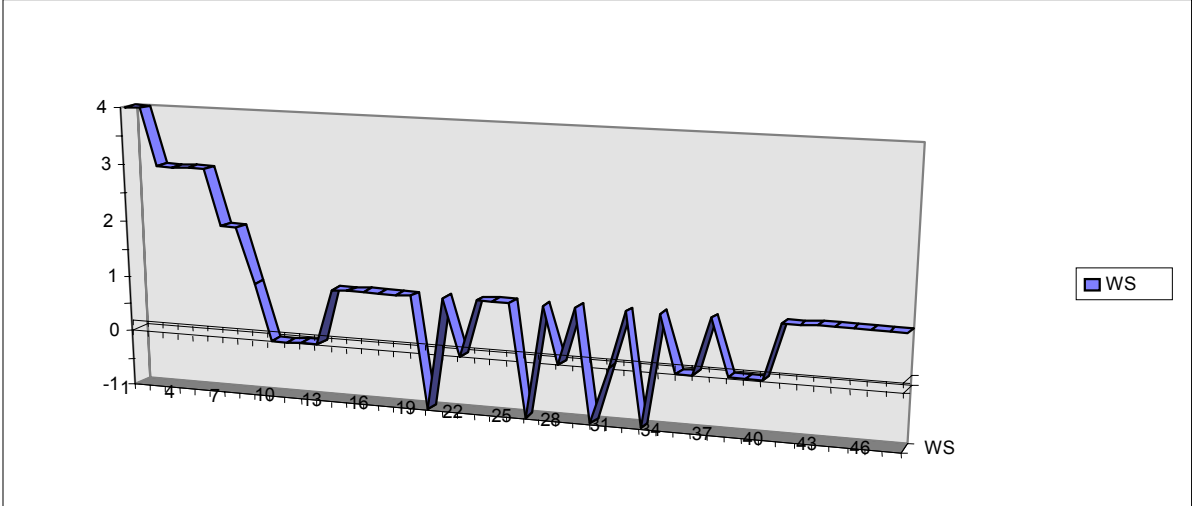


Diagram 1: *The basic structural layers of WS*
 (Vertical: 4 = INTRO, 3 = BACKGROUND, 2 = FRAME, 1 = SWITCH, 0 = CONT, -1 = QUOTE;
 Horizontal: Number = Textual unit ('paragraph'))

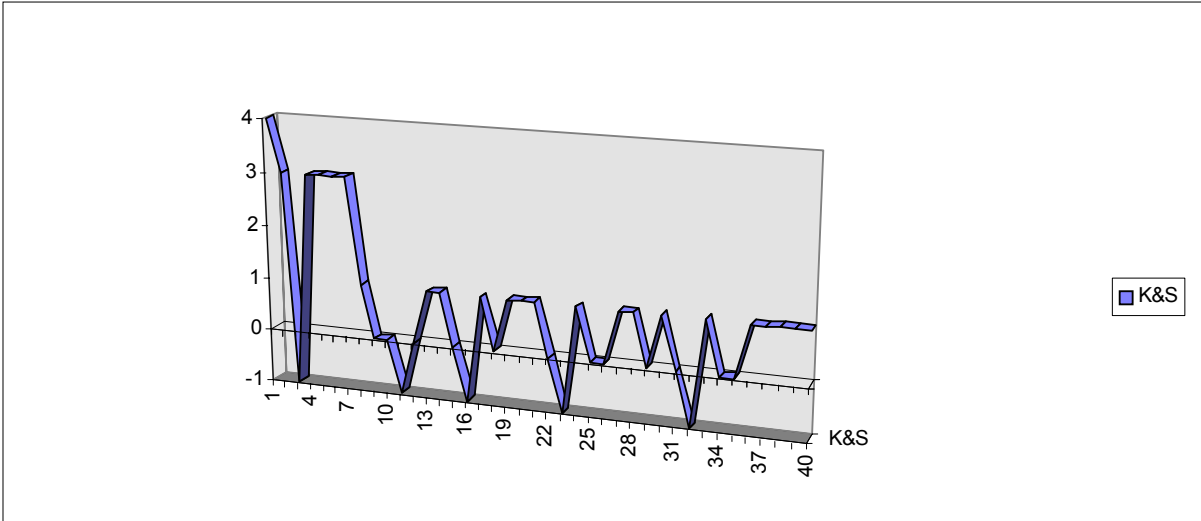


Diagram 2: *The basic structural of K&S*

Although K&S exhibits a slightly different pattern in the initial section of the story, it comes clear that both stories show a rather similar topology. The main difference is given by the relatively high degree of switch reference sequences in WS, compare Diagram 3, which lists the frequencies of the individual features for the two texts:

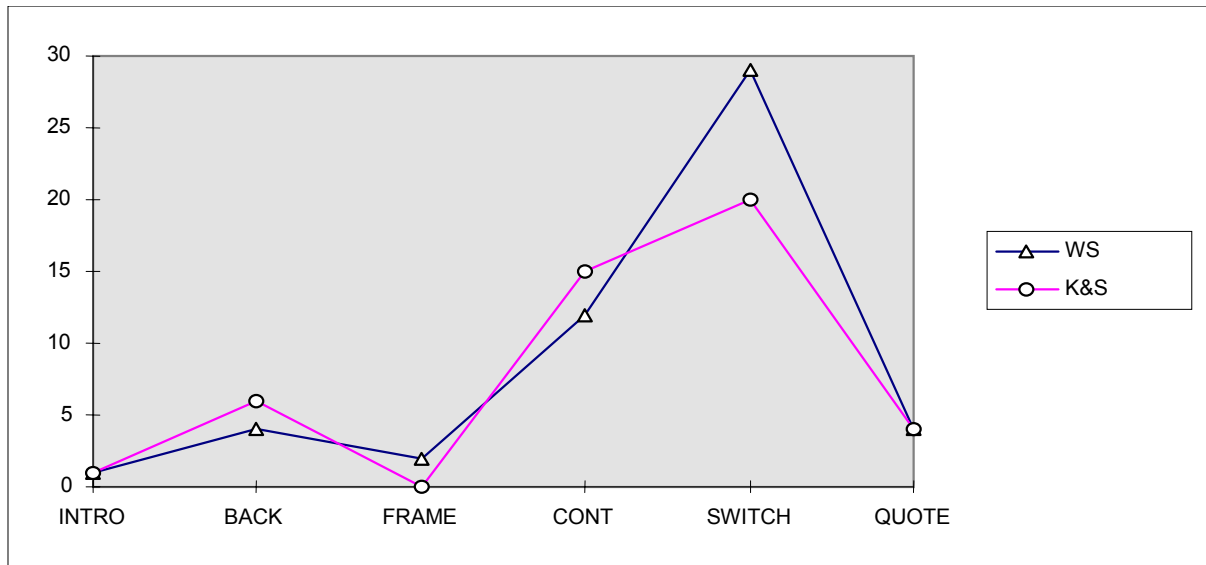


Diagram 3: *Textual Organization of WS and K&S*

The greater number of switch structures in the Nizh text can be related to a more ‘communicative’ style expressed by this tale: The speaker allows the hearer to take different ‘empathic’ perspectives, whereas in K&S, the hearer is strongly oriented to the three main protagonists. Accordingly, we can expect that WS is marked for more overt anaphoric elements than K&S (see below):

3.2 Textual Landmarks

According to the GSS framework, every utterance reflects a diaphesis process (see section 1) that singles out potential ‘points of reference’ (or: ‘landmarks’) in which an event stimulus is grounded. The number of referential units isolated from the *gestalt* stimulus depends on a number of factors most of which are related to more general mechanisms of interacting with the ‘outer’ world. Likewise, aspects of long term / short-term memory storage play a crucial role as well as discourse and world knowledge. In Pragmasyntax, two different types of isolating landmarks can be distinguished: First, textual landmarks, that is the number of landmark types that show up in the totality of a narration. Second, phrasal landmarks, that is the number and types of landmarks that are involved in the formulation of a PhIS. The number of textual landmarks is relatively high in both texts:

(15) Number of Landmarks

K&S: 114 tokens (38 types) = 42.06 % of all textual tokens

WS: 107 tokens (49 types) = 38.90 % of all textual tokens

Note that in order not to complicate the picture, I have not taken into account the question to which degree a given landmark has textual referential properties. In both texts, the six most frequent landmarks cover roughly the half of all landmarks: In K&S, the six most frequent landmarks cover 66 out of 114 landmark tokens (57.89 %), whereas in WS there are 45 out of 107 landmark tokens (42.05 %). Still, there is a significant difference between the two texts: In K&S, there are two landmarks (‘king’ and ‘boy/son’) that dominate the whole story. In WS, however, there is no such ‘peak’ in the distribution of landmarks:

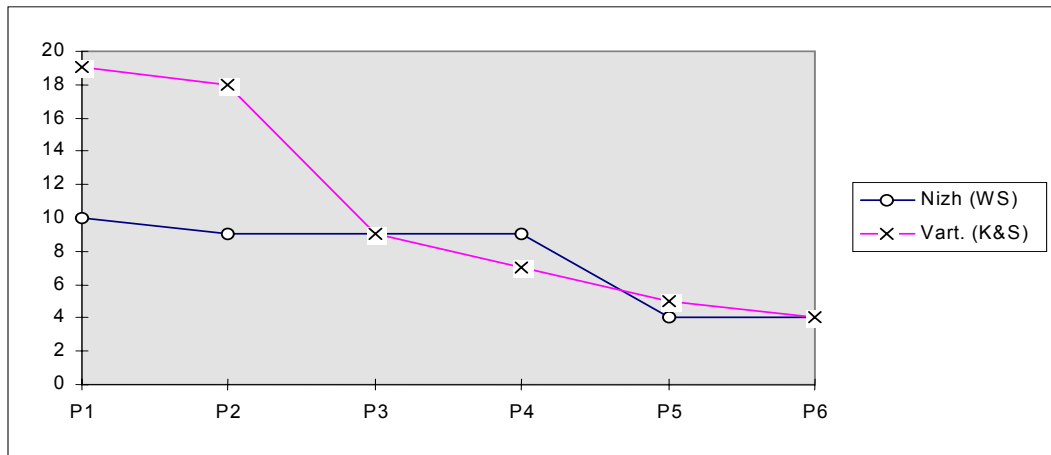


Diagram 4: *Frequency of main protagonists*

3.3 PhIS internal structures

With in a single PhIS, pragmasyntactic features show up at different levels. Basically, we have to deal with the following aspects:

- (16) 1) General morphosyntactic layout and distribution of functional domains;
 2) Word order features;
 3) Referential setting;
 4) Deictic and reflexive strategies;
 5) Focal strategies.

Obviously, all these ‘domains’ are interrelated and derived from more general principles of ‘clausal’ organization. Still, it seems useful to discuss these domains separately for heuristic reasons.

3.3.1 General morphosyntactic layout

From a typological point of view, Udi is a dependent marking language. Morphology is present to a degree that allows labeling the language modestly agglutinating. This comes true from the figures in Table 1 above: In K&S, the overall ratio of morphemes per word is 1.24, as opposed to 1.45 in Nizh.¹ The higher ratio in the Nizh text is conditioned by the greater number of morphemes that appear in the text (K&S 336 morphemes, WS 398 morphemes). The fact that we can observe in Modern Nizh Udi a stronger tendency towards morphological explicitness is related to basically two features: a) The TAM system of Nizh is more complex than that of Vartashen; b) In Nizh, the focal particle *-al* plays a more pronounced role than in Vartashen (see below). In sum, the following picture emerges:

(17)

	Vartashen (1900) %		Nizh (2000) %	
AGR:PIVOT	17,56	59	14,07	56
ANAPH (+ Refl)	2,38	8	3,77	15
CONJ (then)	2,68	9	0,75	3
FOCUS (<i>-al</i>)	1,19	4	4,52	18
INDEF	7,14	24	2,51	10

¹ If we assume that a standard ‘word’ is - at an average - marked for two linguistic categories (e.g. case + number, person+ TAM etc.), we may define a fully agglutinating architecture as being marked by the ratio 2.0 (two morphemes per word). The fusional type would - at its maximum - entail the ratio 1.0 (one morpheme per word).

LOCATIVES	6,25	21	5,03	20
REF. Marker	1,79	6	5,03	20
REL. Marker	8,33	28	6,28	25
RP A	3,87	13	2,51	10
RP IO/O	11,01	37	8,54	34
RP S	8,63	29	9,30	37
SUBJ	3,87	13	0,00	0
TAM	20,83	70	22,11	88
VALENCE	4,17	14	11,06	44
DERIVATION (Plural)	0,30	1	4,52	18
TOTAL		336		398

It comes clear that in Nizh, the relational domain is more elaborated than in Vartashen: In Nizh, 33.57 % of the morphological inventory is used to manipulate verbal (or: relational) concepts, as opposed to only 25 % in Vartashen. The Nizh preference for the manipulation of the relational domain goes together with a less fixed arrangement of the referential domain, see above. In other words: WS gives us the impression as if the ‘event’ becomes more important than its protagonists, whereas in the traditional Vartashen style, events are ‘grouped’ around their protagonists.

This hypothesis is supported by another aspect: Both texts are characterized by a certain amount of inferred structures that are not overtly coded in the text itself. Such inferential structures may concern scripts and frames as well as ‘masked’ actants/referents or verbs/relations (see SCHULZE 1998). Here, I only take into consideration ‘masked’ referents and relations, that is structures the presence of which is understood because of the presence of another lexical unit. As for this type of inference, the two texts at issue differ considerably:

(18)

	Overt	Overt %	Inferred	Inferred %	Total	Total %
A	14	6.97	22	50.00	36	14.69
Av	8	3.98	0	0.00	8	3.27
CONJ	10	4.98	0	0.00	10	4.08
IO	3	1.49	0	0.00	3	1.22
L	30	14.93	1	2.27	31	12.65
O	22	10.95	10	22.73	32	8.98
S	32	15.92	8	18.16	40	16.33
SUBJ	11	5.47	0	0.00	11	4.49
V	71	35.32	3	6.82	74	30.20
	201		44		245	

Overt and inferred units in K&S

(19)

	Overt	Overt %	Inferred	Inferred %	Total	Total %
A	17	9.04	22	32.35	39	15.23
Av	10	5.32	0	0.00	10	3.91
IO	2	1.06	0	0.00	2	0.78
L	20	10.64	0	0.00	20	7.81
O	28	14.89	6	8.82	34	13.28
S	32	17.02	31	45.59	63	24.61
V	79	42.02	9	13.24	88	34.38
	188		68		256	

Overt and inferred units in WS

The first observation relates to the overall percentage of inferred units in the two texts: In WS, 26,56 % of all units are ‘masked’, as opposed to just 17,96 % in K&S. Hence, we can describe a greater preference for masking strategies in Modern Nizh which again hints at a greater ‘communicative’ support. The second observation concerns the internal preference for the role of masked referents: Whereas in K&S, every second masked unit functions as an Agentive, it is the Subjective that is the preferred target for masking strategies in WS. On the other hand, the Objective domain is less accessible to such strategies in WS than in K&S, see Diagram 5.

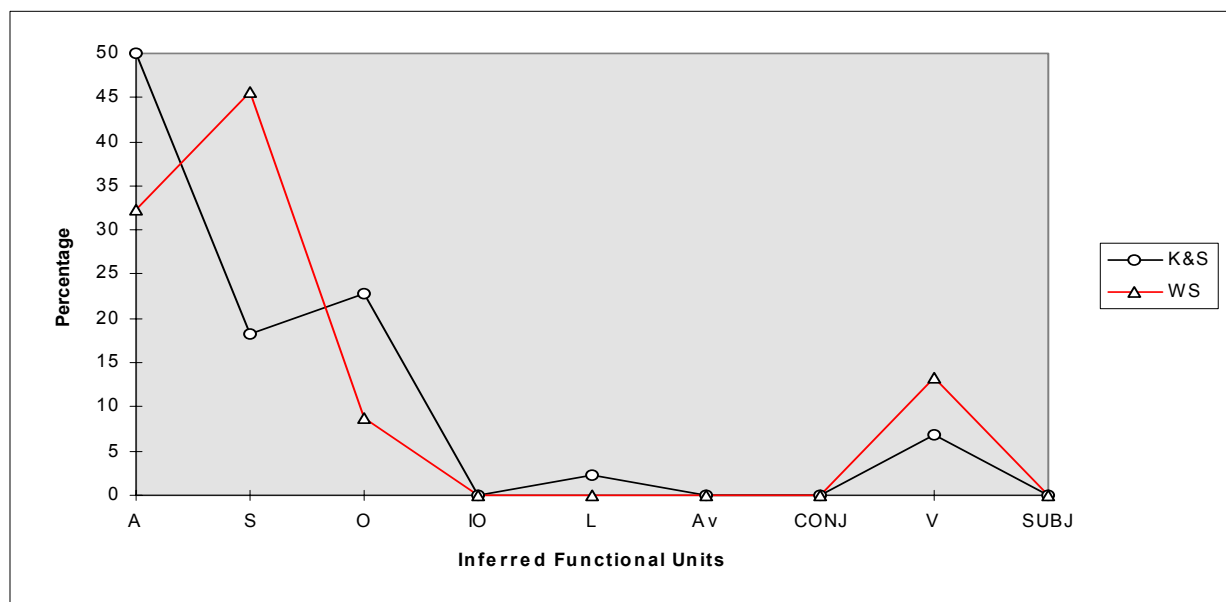


Diagram 5: *Inferred Functional Units in K&S and WS*

The fact that in WS, the O domain is less accessible to inferential strategies, is also documented by the use of the zero-anaphor: Although the overall distribution of covert pronominalization is basically alike in the two texts, the O domain is exempted from this strategy in WS:

(20)

Clause external role	Zero-Anaphor					
	WS			K&S		
	A	S	O	A	S	O
Adressee	1	1	0	6	0	0
Anonymous	1	0	0	4	1	0
Ego	3	0	0	0	0	0
Given topic	2	1	0	10	2	2
New topic	1	0	0	0	0	1
Pivot	18	9	0	4	5	0
Total	26	11	0	24	8	3

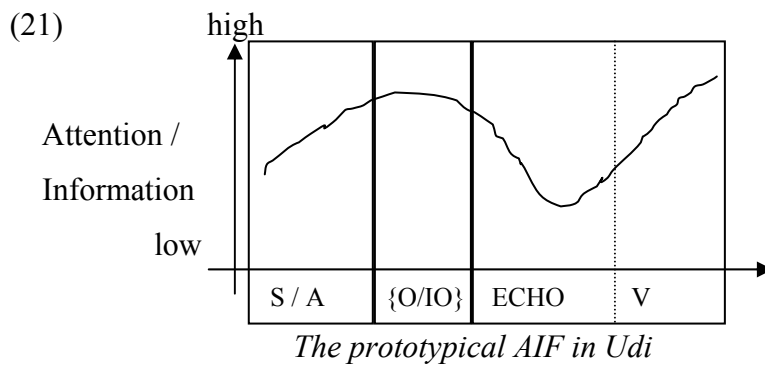
The distribution of zero-anaphora in K&S and WS

Also note that in WS, there is a strong preference to resume a referential topic in pivotal position with the help of a zero-anaphor, whereas in K&S, this is frequently done by doubling the referent. On the other hand, zero-anaphors are especially frequent with Given Topics disregarding their position in the preceding text. A possible generalization seems to be that in K&S, zero-anaphora are strongly related to features of empathy and textual salience, whereas in WS, this technique has stronger cross-clausal, hence syntactic values.

3.3.2 Word Order and Attention Information Flow

In GSS, word order is thought to represent a major (in large parts iconic) ‘tool’ to linearize complex *gestalt* features in terms of the Attention Information Flow. It is hypothesized that the AIF refers to both conceptual properties of the units resulting from diairesis and their behavioral properties in the *gestalt* arrangement. Although there is a great variation among the entrenched types of ordering, it can be claimed that a prototypical AIF is organized in the following way: The initial ‘field’ is marked for ‘high attention’ (resulting in a high information value), followed by a field that allows ‘cognitive relaxation’ (lower information value, high inferential properties). The ‘end field’ qualifies for additional information, but still entails inferential options. In individual conventions of diairesis, this template can be rearranged to a considerable degree. Perhaps the most crucial point is that many such conventions allow a PhIS-like ‘pre-field’ that is marked for a higher attention/information value than the original initial field (resulting in focal clefts and pseudo-clefts). On the other hand, in some conventions, the ordering of linearized *gestalt* entities is coupled with the conceptual ‘domain’ they represent: For instance, relational structures (‘verbs’) may prefer the final position opening a pre-verbal ‘field’ of relatively high attention/information.

In Udi, the most prototypical correlation is as follows:



Accordingly, there are at least two structural focus fields: initial and pre-verbal. As for the two texts, the initial field shows the following preferences:

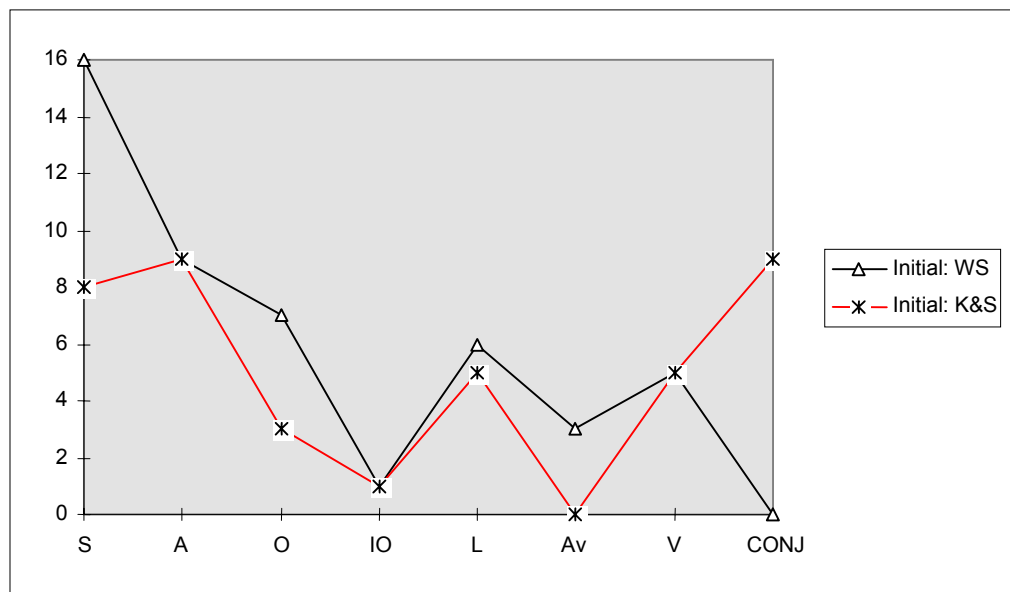


Diagram 6: *Distribution of functional units (initial position) in WS and K&S*

The diagram confirms the overall picture: In WS, there is a strong preference for the S=A cluster to be placed in the initial position of the AIF, whereas in K&S, initial S is less frequent. As for the final position, the following picture emerges:

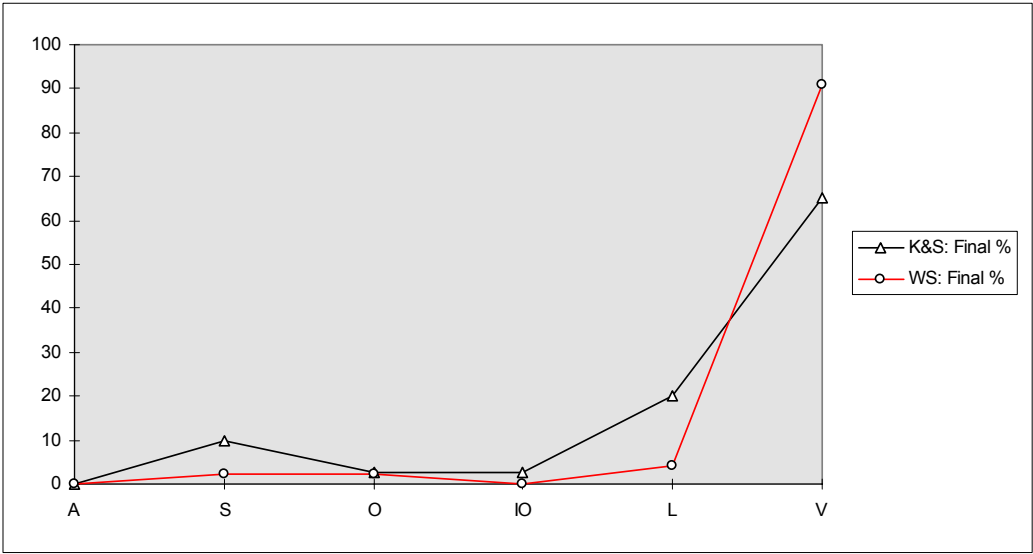


Diagram 7: *Distribution of functional units (final position) in KS and W&S*

In WS, nearly every PhIS ends in a verb (91 % as opposed to 65 % in K&S). In K&S, referents especially in Locative and Subjective function may qualify for the final position, which is extremely rare in WS. On the other hand, the distribution of functional units is rather even with respect to the medial position:

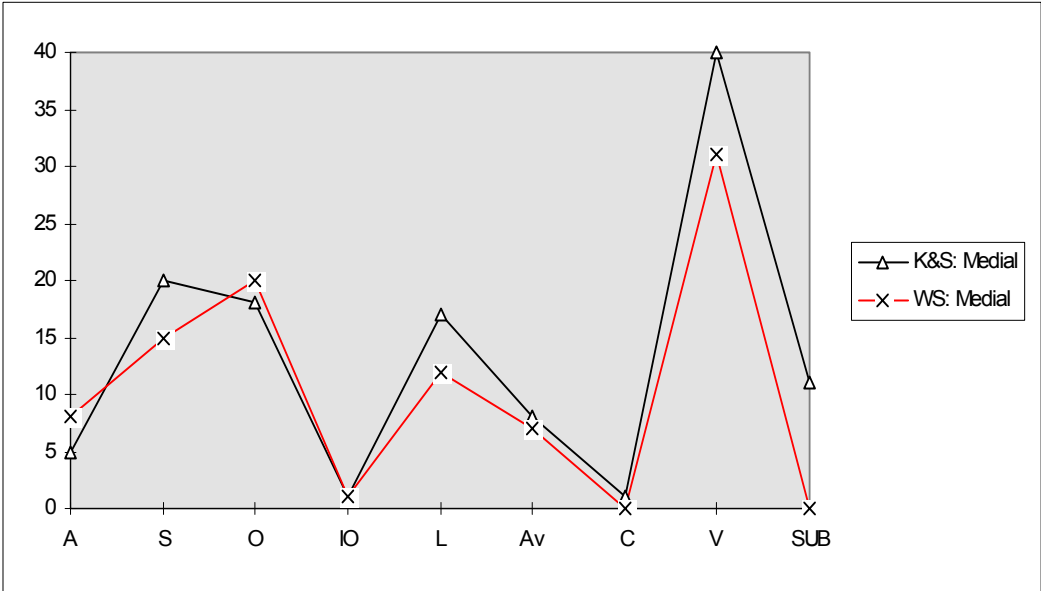


Diagram 8: *Distribution of functional units (medial position) in KS and W&S*

From this we can conclude, that in Modern Nizh, there is a strong tendency towards positional stability. Most likely, this fact is related to the impact from Modern Azeri.

3.3.3 *Definiteness / Indefiniteness*

A crucial point in the description of the AIF is related to the question to which degree reference towards textual, discourse, or World knowledge is marked in the text. Udi does not (yet) have developed a systematic paradigm of ‘articles’. Instead there are basically three

heterogeneous means that can be described as ‘specification strategies’: a) the use of *sa* ‘one’ as an ‘indefinite’ article; b) the use of adnominal deictic terms for definite reference; c) the use of the Dative (in Nizh) or Dative2 (in Vartashen) to mark specific referents in objective function (Fluid-O, see section 1.3). These three techniques can all be related to the dichotomy ‘Given/New Topic’:

(22) **New Topic:**

Introduction of a referent that is thought to play a role in the ongoing event cluster

Marker: *sa* or \emptyset

Given Topic:

A textually, cognitively, or habitually/culturally known referent.

Marker: Adnominal deixis, Dative(2) for referents in O function, Possessors

No Topic (= α Top):

Referent that is not ‘tracked’ at all in the ongoing event cluster.

Marker: *sa* (rare), \emptyset

It should be noted that some types of referents are ‘naturally’ related to one of these topic types. For instance, Speech Act participants are always related to Given Topic marking strategies in Udi, whereas mass nouns are usually to New Topic. In sum, the two texts at issue show the following distribution:

(23)

	WS		K&S	
New Topic	<i>sa</i> ‘one’ ~ \emptyset	4	<i>sa</i> ‘one’ ~ \emptyset	10
Given Topic	\emptyset ~ POSS (O: DAT)	89 (O: 22)	\emptyset ~ POSS (O: DAT2) ~ DX	82 (O: 19)
No Topic	\emptyset	3 (O: 1)	\emptyset	23 (O: 3)

Topic marking in WS and K&S

This distribution illustrates that in K&S, there is a strong tendency to produce α Top structures, which help to ‘set the scene’ and to frame the reported event. In WS, this technique is rare. Obviously, the narrator has relied much upon the hearer’s inferences about scene settings and frames. Again, we can observe the stronger ‘communicative’ orientation of WS as opposed to K&S. On the other hand, K&S makes much more use of the indefinite marker *sa* which is nearly inexistent in Nizh. The use of *sa* is correlated with the presence of adnominal deictic terms to indicate definiteness, a technique that again is alien to WS.

3.3.4 Deictic and reflexive strategies

As has been said in the preceding section, K&S occasionally applies adnominal deictic terms to mark definiteness. Roughly, 10 % of all referential tokens are marked for deixis. Quite in accordance with what can be found in other Vartashen narratives, the text K&S usually applies the Proximal (*me*). In Vartashen Udi, the Proximal is strongly associated with features of positive empathy (‘sympathy’), which can also be seen from the present text: Here, it is basically the main protagonist (the shepherd’s son) who is marked by the Proximal. The Medial (*ka*) is used especially if a Given Topic is embedded into a multireferential scene or if it appears in ‘direct speech’ (or in quotation). In the Nizh text, the adnominal deixis is not used at all (the one exception *me k’oya* ‘in this house’, ‘at home’ should be described as a stereotypical formula).

The picture changes if we consider deictic anaphora: Here, K&S shows just four examples (three of them endophoric, one exophoric), a number too small to allow any conclusion. In the Nizh text, there are eleven occurrences (nine endophoric, two exophoric). Contrary to K&S,

WS refers to the Distal nearly exclusively. From this we can infer that in Nizh, the tendency towards the ‘stabilization’ of a ‘third person’ pronominal form is much more pronounced than in Vartashen.

Reflexive anaphoras are used in both texts to indicate cross-referenced possessors. In most instances, we have to deal with cross-clausal (long distance) reflexives, which usually refer to a referent loaded with ‘sympathy’ (in a metaphorical sense). Nevertheless, the number of reflexive constructions is comparatively low. In the speech of many Udis, the reflexive pronoun *ič* tends to be used as an overall cross-referentializer, as long as the cross-referenced entity represents the ‘main protagonist’. The restricted use of this constructional pattern in the two stories may be related to the fact that they do not represent an inter-individual discourse, but rather memorized event sequences.

3.3.5 Focus strategies

Above, it has been said that Udi is heavily dominated by strategies to mark focal properties of a referent. Such strategies belong to the paradigm of ‘Pragmatic Intervention’, although they tend to become strongly routinized.

There are at least three types of focal strategies in Udi:

- (24) 1) Agreement based focus (Floating Agreement Clitics, FAC)
- 2) Particle based focus
- 3) Focal Word Order (‘Focus field’)

Agreement based focus is expressed with the help of floating agreement clitics that have a bipolar character: They focus their host *and* cross-reference a specific actant (which again can occasionally be the host itself). The two texts show the following host types:

(25)

WS				K&S			
ADV	1			ADV	1		
NEG	2			NEG	2		
REF	19	A	2	REF	15	A	1
		O:def	2			O:def	1
		LOC	6			LOC	2
		S=O:ind	7			S=O:ind	10
		PP	2			PP	1
ADJ	0			ADJ	3		
MOD	0			MOD	1		
Q	4			Q	0		
V	30			V	37		
TOTAL	56			TOTAL	59		

Focus hosts in WS and K&S

Although the two texts are too short to allow final conclusions, it should nevertheless be noted that in K&S, there is a stronger preference to use verbs as the host of Focus clitics (see (26)). This tendency is confirmed by a great number of other texts. In Nizh, we can observe the tendency to link the clitic to a preceding constituent more mechanically than in Vartashen. This again would illustrate the tendency to use Agreement clitics in a more entrenched way than in Vartashen. Table 8 summarizes these aspects:

(26)

	Nizh		Vartashen	
Referential	19	33,93 %	15	25,42 %
Relational	30	53,57 %	37	62,71 %
Modifying	3	5,35 %	7	11,86 %
Q	4	7,14 %	0	0,00 %

Basic host types

In case a non-verbal host is chosen, the preferred position of this host is the pre-verbal focus field as long as other constraints do not apply. If we take the beginning of a PhIS as a point of reference, we can describe the following distributional patterns:

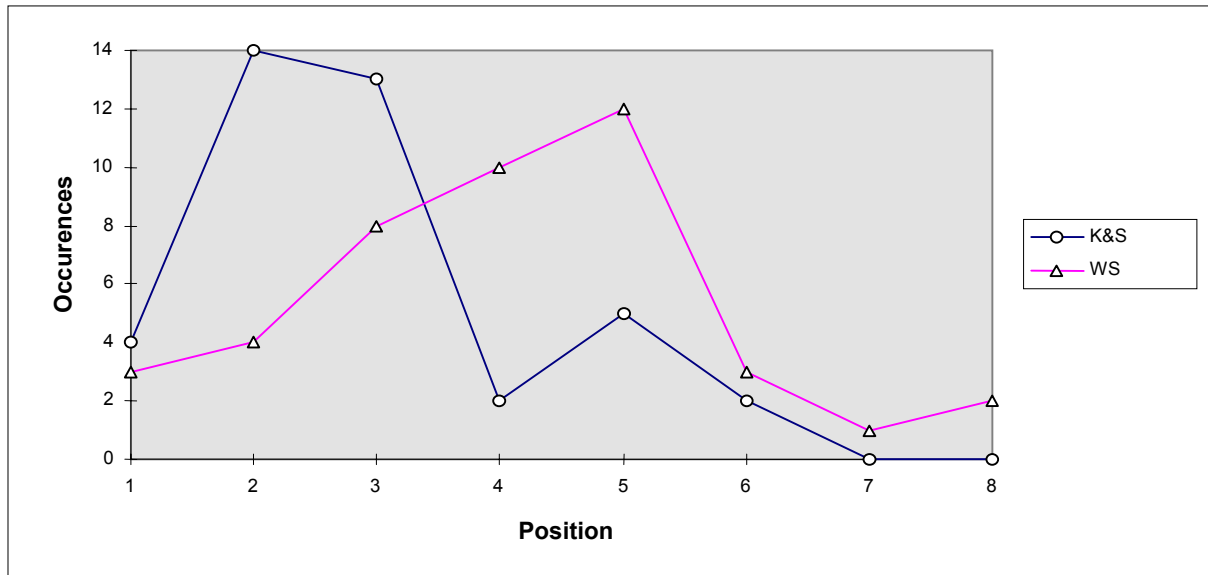


Diagram 9: *First occurrence of an agreement-based focus particle in a PhIS*

In Nizh, there is a strong tendency to position a focused host nearer to the ‘right’, whereas in Vartashen, these hosts frequently occur towards the beginning of a PhIS. This tendency reflects a less ‘open’ function of clitic focus in Nizh: If we assume that the initial segments of a PhIS are marked especially for units related to Given Topic, we can say that Agreement focus has in Nizh become more strongly coupled with New Topic segments. In Vartashen, this condensation in function seems not to have taken place yet.

This shift is correlated with a more pronounced pre-verbal focus field in WS. Such fields are typical for a number of Turkic languages and hence we can assume that the Nizh preference for pre-verbal focus at least in parts stems from the adoption of Azeri pragmasyntactic routines. The pre-verbal focus field competes with two other focus fields, one opening a ‘pragmatic slot’ at the beginning of an utterance, the other one placed at the end of the utterance. Historically, the initial field had specialized to host referential units marked by a relational function whereas the final field preferably hosted locatives and adverbs. Another correlation was Initial = Focused Given Topic, Final = Focused New Topic. The language of K&S in parts still reflects this pattern, whereas it has considerably changed in Nizh, compare:

(27)

	WS			K&S		
	Initial	Preverbal	Final	Initial	Preverbal	Final
S	0	0	0	0	0	3
O	0	16	2	0	14	1
L	6	8	1	2	14	6

IO	1	1	0	0	0	0
Av	4	7	1	1	5	1
CONJ	0	0	0	6	0	0
TOTAL	11	32	4	9	33	11

Focus fields in WS and K&S.

The great number of Locatives and Adverbs in WS that are placed in the initial focus field illustrates that the language is on its way to open this slot to peripheral constituents to a greater extent than it is given for K&S. On the other hand, K&S makes use of conjunctions that are preferably placed in the initial focus field. In fact, a typical feature of Modern Nizh is the use of adverb-like elements or locatives in the function of conjunctions. Hence, we can correlate the weak presence of standard conjunctions to the tendency of using adverbs and other clause modifying elements in junction-like functions. On the other hand, Nizh has nearly completely given up the PhIS-final focus field, which is typical for many Vartashen utterances. Diagram 9 summarizes the distributional patterns in the two texts:

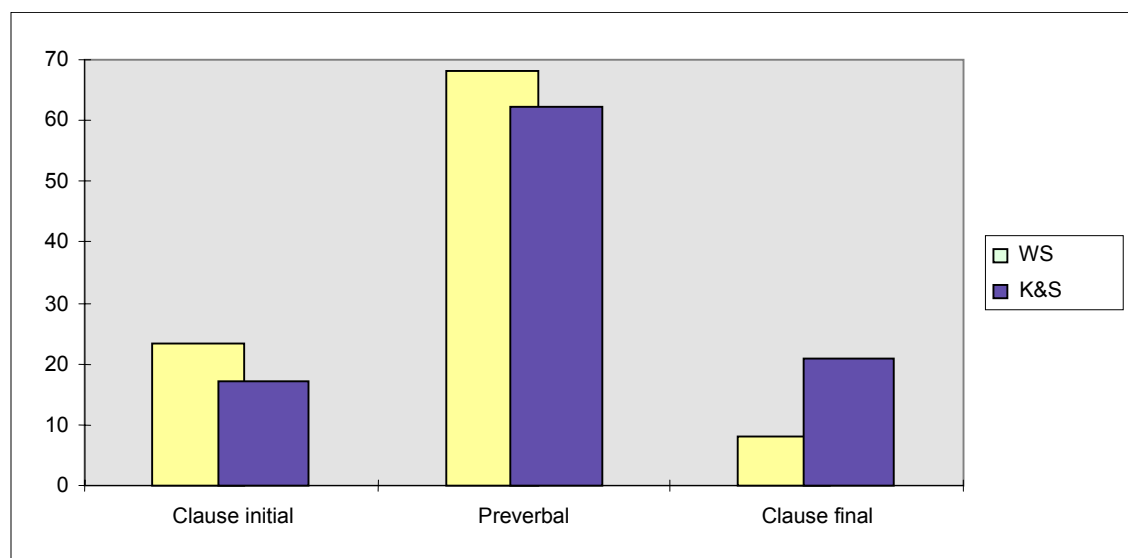


Diagram 10: *Percentage of referents in focus fields*

The rearrangement of focal strategies in Nizh also becomes apparent from the use of the ‘additive’ (or: emphatic) focal particle *-al*. This particle can attach to any kind of host. Nevertheless, it is the modern dialect of Nizh that makes extensive use of this particle whereas it is more restricted in Vartashen. In K&S it is documented only five times, as opposed to eighteen occurrences in KS. The *-al*-particle typically prefers its host to be in the first position of a clause and hence is related to ‘Wackernagel’s Position’ (ten occurrences). Still, it should be noted that in WS, the particle cannot be termed a Wackernagel particle, because it may also be attached to a host in second position (eight occurrences). Consequently, we can describe some kind of ‘division of labor’ between the two morphological focusing techniques in Nizh:

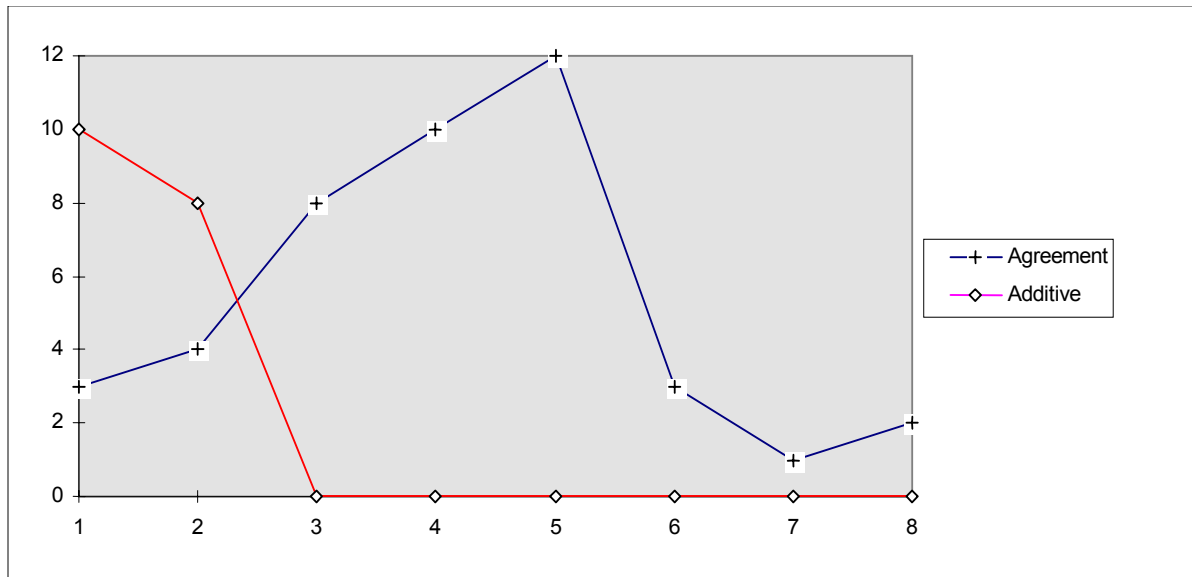


Diagram 11: *Positional distribution of Agreement and Additive Focus in Nizh*

In order to maintain the overall focal ‘level’ of a PhIS, the speaker applies the *-al*-focus for initial segments, and the Agreement focal clitics for subsequent segments. This type of phrasal organization is rather unusual in Vartashen.

4. Summary

The analysis presented in my paper has aimed at the description of a crucial part of Udi linguistic knowledge as it shows up in two texts from two different dialects and two different time layers. The fact that I have singled out just one aspect, namely that of Pragmasyntax, conditions that many parameters that are central for the organization of Udi linguistic practice could not be touched upon. In addition, it has to be taken into account that even those pragmasyntactic features that are elaborated in my paper can only be fully understood if we analyze them in their complex paradigmatic, semantic, and syntactic settings. For instance, the system of Focal Agreement clitics also entails features of semantic ‘roles’, grounding strategies (subject assignment), and relation based splits all of which I could not consider in this paper. Nevertheless it could have been shown that the Pragmasyntax of the modern variety of Nizh considerably differs from that of Vartashen. The fact that I have chosen two stories that relate two different event clusters did not allow dwelling upon the question of whether speakers from Nizh and Vartashen use the same diairesis techniques. However, the analysis given here suggests that Nizh speakers today tend to construct a *gestalt* experience on a stronger ‘relational’ basis than Vartashen speakers from the late 19th century. The higher number of zero-anaophora and verb related procedures illustrate this point. In construing the communicative *gestalt* of a stimulus, Nizh speakers seem to rely more strongly on interactional features. They refer to parameters of discourse and World knowledge to a much higher degree than Vartashen speakers hundred years ago. To put it into simple terms: The actual speech of Nizh seems to be much more ‘pragmatic’ than that of 19th century Vartashen Udi. The reason for this shift can be seen in an overall tendency to ‘modernize’ the language, that is to accommodate it to a communicative style as propagated by Western traditions.

The paper has also tried to show that the diagnostic tools applied to the Udi data can be used at a larger scale to reconstruct the pragmasyntactic knowledge of speakers in a speech community. Naturally, in my paper I could apply these tools to selective data only. Many of the claims and tools have to be refined once they are applied to massive corpora.

Nevertheless, I hope to have demonstrated that Cognitive Typology has not necessarily to end up in a mere perspective that would start with just a few data and would build a huge 'house of interpretation' around these data.

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