

## SPR Berna 2011

On the unit of analysis in the study of wishes in speech acts, applying the DLA

David Maldavsky (UCES, Buenos Aires, Argentina), Delia Scilletta (UCES, Buenos Aires, Argentina), Silvina Perez Zambón (UCES, Buenos Aires, Argentina)

David Maldavsky (UCES, Buenos Aires, Argentina), Delia Scilletta (UCES, Buenos Aires, Argentina), Silvina Perez Zambón (UCES, Buenos Aires, Argentina)

### I. Aim

To decide, among three types of unit of analysis, which one is the most indicated in the studies of speech acts during sessions.

### II. Problem

One of the methodologic problems in the speech acts' researches is the decision on the unit of analysis and its consequences on the research. In *Describing talk: a taxonomy of verbal response modes*, Stiles (1992) describes his evolution in the way of understanding the unit of analysis in the study of discursive exchange. He stated that in the beginning he changed his election of the unit of analysis from the *speech* (everything the speaker says without being interrupted) to the *sentence* (everything that appears between an initial capital letter and the following one in the transcription), until he finally chose the *utterance*, that is to say an independent clause, a non restrictive dependent clause (that is to say that, being a utterance) dependent from another one, its function is not to restrict the main one), each element of a composed predicate (that is to say, two or more predicates that have the same subject), or a recognition, evaluation or appeal term (*address*). Stiles' argument to prefer the utterances as units of analysis is practical: it becomes easier to study simple units than to study complex ones.

### III. Instruments

The David Liberman algorithm's (DLA) has a grid (Table I), a calibration index (Table II) and instructions for the study of wishes in speech acts. The repertory of wishes is: 1) Intrasonic libido (IL), 2) Primary oral (O1), 3) secondary oral sadistic (O2), 4) primary anal sadistic (A1), 5) secondary anal sadistic (A2), 6) urethral phallic (UPH) and 7) genital phallic (GPH).

Table I: Grids for the analysis of wishes in speech acts

IL	O1	O2	A1	A2	UPH	GPH
State of things	Abstract deduction	Laments	Insult, blasphemy or imprecation	Proverbs, judgments and maxims	Proverb	Praise
References to corporal states and processes	Mystic or metaphysical thinking	Reproaches and self-reproaches	Curse	Ritualized and religious invocations	Premonitions	Congratulations
Banality	Logical paradox	Condolences	Defamation	Quotes	Advice	Celebration
Onomatopoeias of sounds of inanimate objects	Metalinguage	Apologizing and asking for forgiveness	Trick	Reference to a consensual knowledge	Warning	Dedication
Flattery	Ambiguity and	Requesting and	Incitement	Conditional	Questions or	Gratitude

	lack of definition	begging		imperatives	affirmations referred to the temporal-spatial orientation	
To force into the other's speech	In code vocalization	Demand	Triumphalistic mockery	Contrats	Vocalizations of disorientation	Promise
Counts	Denial that creates a logical contradiction to the other's statement	Love, recognition and approval demand	Power exhibition	Orders and indications according to the law	Recovery or maintenance of the orientation	Private oath
Catharsis	References to disturbed corporal states	Emocional manipulation	To surrender not to declare defeated	Public oath and imposition of obligations	Interruptions of the other's speech or the own one	Toast
		Feeling of the own or the other's futility	Intrusive interruption	Critics according to the morality, the cleanliness, the culture and the order	Accompaniment of the other's speech	Summons to the listener
		Pacifying subjugation	Distorting	Justification of actions, words and ideas	Regards and other forms of contact	Invitation
		Empathic comprehension	Provocations	Deduction, conjecture or concrete inference	Cautious approximation and withdrawal	Expressing a wish
		Exaltation of the sacrifice	Abusive orders of doing something opposite to the law or the moral rules	Concrete generalization	Excessive approximation	Exaggeration and emphasis
		Reference to affective states	Denunciations and accusations	Anticipation of concrete facts	Vocalizations of distrust	Dramatization
		Reference to the climatic state, the passage of time or to objects	Confession of actions opposite to the law or the moral rules	Causal link	Pet word	Examples
		Reference to being developing an action	Justification of transgressions to the law	Clasification	Apocopes	Sound onomatopoeia of animated objects
				Definition	Vocalizations in suspense	Interjection
				Control of the own and/or the other's memory, thought and/or attention	Minimizers	Syntactic redundancy
				Information of	Pieces of	Plays on words

				concrete facts	gossip and rumors	and jokes
				Description of concrete situations	Ambiguity and avoidance	Completing the other's vocalization
				Questions and other ways of requesting information	Expression of power - impotence	Comparison between qualities
				Questions tending to establish the reasons	Competitive challenge	Metaphorical comparison
				Contrast between the beliefs and the facts	References to routine actions	Causal relation in which the determinant factor is the intensity of a quality
				Asking for permission		Equation between the quantities of the qualities
				Consults		Vocalizations of rarity or incredulity
				Distributive argument		Asking for the form
				Classification		Reference to corporal disgusting conditions
				Presentation of alternatives		Reference to a disgusting reality
				Explanation		Frenzy hub cap
				Syntactic rectification		Exclamations
				Abbreviations and initials		Show
				Doubt		Repetition of the other's vocalization
				Objections		
				Opposing vocalizations or denials of an exaggeration		
				Comparison between objective or hierarchic features		
				Reference to		

				the objective or hierarchic positions		
				Correction of the own or the other's vocalizations		
				Confirmation (or rectification) of the other's opinion or request of confirmation of the own one		
				Pointing out		
				Synthesis		
				Introduction or closing of a topic		
				To detail		
				Self-criticism		
				Making decisions		
				Project of action		
				Affirmation		

**Table II: Calibration index**

		Calib.
IL	8	5.62
O1	8	5.62
O2	15	3
A1	16	2.81
A2	45	1
UPH	22	2.04
GPH	31	1.45

Besides, the therapist's interventions were classified taking into account their function. The repertory includes three options: 1) introductory (contact, asking for information), 2) main (aiming at tuning in with the patient, establishment of connections: causal, comparative ones, and so on), 3) complementary (exemplification, summaries).

#### IV. Five investigations of speech acts with the DLA

##### IV.1. Presentation

We will expose five investigations on speech acts. In each study two evaluators (D and S) and one coordinator participated. D and S had a previous experience of about 4 months in the application of the DLA, while the coordinator had a experience of several years. The coordinator provided the researchers with the instructions, gave a brief example and added the manualization of the instrument for each specific fragmentation and analysis. After each evaluator had delivered her study, the coordinator showed the

evaluators the results of the two studies and requested each one to, after taking into account the other's opinions, carry out the corresponding rectifications. Once this new step was accomplished, the coordinator requested both raters to discuss between each other in order to try to reach a consensus.

The sample for these five studies is composed by a taped psychotherapy session of a therapist with Marisa, who received an outpatient treatment in a public institution for having self-inflicted injuries in her skin. During session, the patient initially narrated her conflictive relationship with her boyfriend and then she referred to a scene with her father, during which she threatened with a new self-inflicted cut to her progenitor's discourse, that seemed almost nonsense. The therapist, on the other hand, was centered mostly in the conflict of the patient with her boyfriend.

#### IV.2. First study: the preparation of the sample

The preparation of a sample involves a passage from a recorded material to a written text. As the recorded material corresponds to a colloquial exchange, there are usually several difficulties when deciding between the versions that might differ syntactically or even orthographically.

We will now present the procedure and then the results of the corresponding study. Two judges (D and S) established the sample separately, then they compared the respective results and, if any of them or both considered it convenient, they modified their preceding study. The main disagreements consisted in three big items: 1) inverted commas, 2) exclamation and interrogation marks, 3) punctuation. The unit of analysis of this study was composed by the letters of the written version. Sometimes a disagreement covers several letters, as when we replace a full stop by a comma, which also involves changing a capital letter by a minuscule. Other times the differences involve only one letter, as when we add a comma. The comparison between the transcriptions of one and other rater showed that at the first moment it existed a 1,47 % of difference referred to the interpretation of the taped version, and that at the last moment this difference disappeared. .

#### IV.3. Second study: comparison between the results of the segmentation of a text into utterances and regarding the consequent analysis

In this part we are interested in carrying out a study of the fragmentation and analysis of Marisa's utterances during the whole session. Two evaluators (D and S) fragmented and analyzed the sample in an independent way, then they compared the respective results and, if any of them or both considered it convenient, they modified their previous analysis. The exchange between the raters conducted to a series of modifications and adjusts. Now we present the final result of the comparison between the analysis of one and other rater, after having exchanged criteria.

We analyzed the agreement regarding the dominant wish taking into account only those fragments in which both evaluators coincided in the segmentation, because it made no sense to analyze the agreement, not being identical the fragments that each one evaluated. Among a total of 448 fragments, 444 were selected because there was a coincidence in the segmentation. So the segmentation was coincident in the 99.11% of

the cases and there were differences in the 0.89% of the fragments. There was agreement on the analysis of wishes in 437 fragments over 444 (98.42%)

#### IV.4. Third study: comparison between the results regarding the segmentation and the analysis of the sentences

In this part we are interested in a study of the segmentation and analysis of Marisa's sentences during the whole session. Two evaluators (D and S) have fragmented and analyzed the sample in an independent way, then they compared the respective results and, if one of them or both considered it convenient, they modified their previous study. We now present the comparison of the final results, after the raters exchanged their criteria.

There was a complete agreement regarding the segmentation. The agreement regarding the dominant wish was analyzed. Those fragments (8 in total) in which what was indicated didn't correspond to any of the categories of the classification were not included in the analysis. There was agreement on the analysis of wishes in 222 fragments over 225 (98.67%)

#### IV.5. Fourth study: comparison between the results of the segmentation of a text into the speeches and the consequent analysis

In this part we are interested in carrying out a study of segmentation and analysis of Marisa's speeches during the whole session. The exchange between the evaluators (D and S) conducted to a series of modifications and adjusts. We present now the final result of the comparison of the analysis of one and other evaluators, after having exchanged criteria. There was a total agreement in the dominant wish and in considering if the speech was interrupted.

#### IV.6. Fifth study: on the segmentation of a text in the therapist's speeches and the analysis of the function of the interventions

A variant of this analysis of speeches is presented while studying the therapist's interventions. Such study might be carried out with two different strategies of analysis: 1) in wishes, same way as with the patient, 2) considering the function of the intervention. The study of the functions of the interventions involves having a classification, which we have exposed above. Usually the study of the therapist's wishes and defenses aims at investigating his/her subjectivity during the sessions, as much as the inter-subjectivity, which includes taking into account how the therapist's expressive style promotes certain effects in the patient. From these perspectives (therapist's subjectivity and intersubjectivity), it seems convenient to fragment his/her discourse taking into account the function.

We are now interested in carrying out an inter-judge reliability test focused in the study (which includes segmentation and analysis) of the therapist's speeches during the whole session. During the session the therapist uttered 735 words, some of them incomplete. Next we consign, for each evaluator, (a) the amount of speeches detected, (b) the amount of speeches impossible to analyze (because there was an interruption of the patient that prevented from deciding which wish predominated in the end of the therapist's speech)

and (c) the type and amount of interventions and the type and amount of wishes without having applied the calibration index.

The exchange between the judges conducted to a series of modifications and adjusts. We present now the final result of the comparison between the evaluation of one and other rater, after they had exchanged criteria. In the study of the function of the therapist's interventions, there was a total agreement. In the analysis of wishes there was agreement in 49 fragments over 50 (98.0%)

#### V. Comparison between the results of the studies of Marisa's utterances, sentences and speeches

So far we have focused in the consensus rating based in different criteria for the segmentation of the sample. Is time to focus in the results of these studies regarding the detection of the wishes. Here we have the results calibrated of the three types of units of analysis (Table III):

Table III: Results of the studies of the three types of units of analysis

Speechs			
Wishes	N°	Calib.	%
A2	27	27	40.57
GPH	9	14.58	21.91
INC.	6	6	9.02
UPH	4	8.2	12.32
O2	2	5.2	7.81
IL	1	5.57	8.37
TOTAL	49	66.55	100

Utterances		S		D		
Wishes	N°	Calib.	%	N°	Calib.	%
GPH	166	268.92	45.32	168	272.16	46.22
A2	246	246	41.46	250	250	42.45
INC.	1	1	0.17	1	1	0.17
UPH	26	53.3	8.98	23	47.15	8.01
O2	5	13	2.19	5	13	2.21
IL	2	11.14	1.88	1	5.57	0.94
TOTAL	446	593.36	100	448	588.88	100

Sentences		S		D		
Wishes	N°	Calib.	%	N°	Calib.	%
GPH	102	165.24	50.64	102	165.24	52.1
A2	106	106	32.48	108	108	34.05
INC.	8	8	2.45	8	8	2.52
UPH	11	22.55	6.91	11	22.55	7.11
O2	3	7.8	2.39	3	7.8	2.46
IL	3	16.71	5.12	1	5.57	1.76
TOTAL	233	326.3	100	233	317.16	100

The results show a coincidence regarding the wishes detected in all the analysis: A2, GPH, UPH, O2, IL. However, the calibrated results of these three studies show differences regarding the relative predominances. In fact, we observe the strong dominance of A2 over GPH when the analysis is about the speeches (45.66% of the difference between the first one and the second one), a slight predominance of GPH over A2 when the unit of analysis are the utterances (8.35% of the difference between the first one and the second one, which corresponds to a “technical draw”) and a clear predominance of GPH over A2 when the unit of analysis are the sentences (35.25% of the difference between the first one and the second one).

## VI. On the sensitivity of the studies according to the type of segmentation

In consequence, we may ask ourselves which of these three types of fragmentation is the most indicated for the research of clinical facts. The two studies that offer the most extreme and opposed results (speech and sentences) have the common fact that they are based in an interpretation derived from applying a syntagmatic criteria, that is to say, when more of one speech act is taken into account and it is necessary to decide what is the dominant between them due to the ending. It is possible that between these two syntagmatic approaches the one that analyzes speeches covers too much and is oversimplified, due to what it may miss some nuances from the speaker’s discourse.

In order to decide which of the two resting types of segmentation in units (sentences and utterances) turns out more sensitive to differential nuances in the analysis of speech acts it is convenient to consider the amount of units analyzed in one and other study. Here we have the panorama:

Amount of sentences: 233

Amount of utterances: 442

The analysis of sentences usually presents the problem that it allows detecting more than one wish in each unit of analysis, for there usually coexist several utterances. It often occurs that one of them is dominant and the other one is secondary. This fact presents a difficulty when we need to transform the corresponding analysis in a clear cluster exposition, in which we detail these nuances detected in the same unit of analysis. Then it is possible to conclude that the investigations based in the segmentation into utterances allow detecting more richness of nuances in the discourse, and from this perspective it is possible to affirm that it has more sensitivity than the investigations that study other units of analysis, such as sentences or speeches.

## VII. Conclusions

1. The outcomes of the analysis of utterances seem to have better sensitivity than the ones of the speeches and sentences in detecting the subtle nuances of the speech acts. In consequence, the utterance seems to be the best type of unit of analysis for the research of enacted episodes during the session, produced by one as much as by both interlocutors. Besides, this type of segmentation also allows to research sentences and speeches, and even more extended combinations of speech acts.
2. In the exposition of the outcomes it is possible to resort to a paradigmatic (the percentage of the distribution of the speech acts for each wish, combined with the percentage of the distribution of the specific type of the speech act into each wish) or a syntagmatic (description of the sequence of the speech acts in a concrete discourse) criteria. The first criterium contributes more precision to the outcomes, and the second

one allows conducting a more detailed research, but it requires to focus in a more restricted sample.

3. It is possible to compare the outcomes of the paradigmatic analysis of utterances with the results of the frequency distribution of speech acts corresponding to the DLA. Liberman suggested that the hypertrophy of one of the styles (that is to say, of one of the wishes) can be understood as an indicator of the fact that the corresponding wish is accompanied by a pathological defense. In the case of Marisa, recently analyzed, the percentage of GPH speech acts is highly superior to the percentil 25-75 (respectively 8.85 and 20.53) in the frequency distribution, while the percentage of A2 speech acts is about a 15% of difference from the corresponding percentil 25-75 (respectively 48.71 and 57.78) in the frequency distribution. So, GPH is accompanied by a pathological defense, while A2 is accompanied by a functional mechanism.