2.2 Layers of information

WhatsApp messages are built up in a hierarchy: a chat contains messages that contain tokens that contain characters. A corpus of WhatsApp chats should allow for all these layers to be queried. Additionally, there is meta-data about the chats (e.g. number of messages) and about the messages (e.g. the timestamp when it was written) and about the informant (e.g. his/her age) and about the tokens (e.g. part of speech). This makes our corpus a rather challenging and complex endeavor.

spk spk365 spk366						spk365								365					
tok Ar	nke ade	550 SB	vuoi	Aeh h	0	solo	10	perc	ento	di	batteria	XO	Ah	ecco					
⊟ toke	n attribute:	s																	
tok	Anke	adesso	se	vuoi		Aeh			ho		solo	10		percento	di	batteria	хо	Ah	ecco
gloss anche		adesso	se	vuoi		Aeh			ho		solo	10		percento	di	di batteria		ah	ecco
tt_pos	ADV	ADV	PR0:refl	VER:p	res	NOM	1		VER	pres	ADV	NUM		NOM	PRE	NOM	ADV	INT	ADV
tt_lem	anche	adesso	esso se volere _UNKNOWN		VN_	avere		solo	@card@		percento	di	batteria	però	ah	0000			
⊖ mes	sage attrib	utes						_								_			
tok		Anke	adesso	se v	iou	Aeh	ho	solo	p 10) pe	ercento	di	batter	ia xo	Ah e	000			
msg		Anke adesso se vuoi				Aeh ho solo 10 percento di batteria xo									Ah ecco				
msg_id		165379				165380									165381				
msg_type		content				content									content				
most_likely_lang		ita				ita									ita				
msg_tokens		4				8									2				
spk		spk365				spk366									spk365				
demographics_id		45				49									45				
gender		f				m									f				
age_range		18-24				25-34									18-24				
mothertongue		ita,Imo				ita									ita,Imo				
home_postcode		1004				3014									1004				
school_postcode						6500													
timestamp		30 mar 13:31				30 mar 13:32									30 mar 1	13:32			

These layers can nicely be seen when browsing results from a query:

Chats

In this example, you find the chat back as an ID (chat138) at the top in pink. If you want to see the whole chat, you see two options at the very bottom: chat in context (faster) or the whole chat (can be slow). When you click on the little <i> in the top bar, you can also see meta data about the chat, such as the number of speakers, languages, total messages etc.

Messages

In this pink chat, you see three selected messages in blue:

- Message 165379: Anke adesso se vuoi
- Message 165380: Aeh ho solo 10 percento di batteria xo
- Message 165381: Ah ecco

As you can see, these messages have meta data assigned to them, as well, e.g. the message ID and the speaker (these pieces of information are always available) as well as information provided by the informant such as age, mothertongue etc.

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Tokens

The individual tokens are annoted in green in the above example and they are aligned to the message, to which they belong.

Tokens, too, (can) have meta data that is assigned to them. In the example shown above, you have the following meta data that was created by our team or by our computational linguists:

- Gloss: a normalization, i.e. a "translation" into standard spelling. A good example here is *xo*, which was normalized as <però>.
- tt_pos: A part-of-speech annotation generated with the parser TreeTagger.
- tt_lem: The lemma for each token as it was created by TreeTagger.

The red token *di*, by the way, is the one that we queried for to create this screen shot.

Labels

On all three layers, i.e. for chats, messages and tokens, as well as for all the meta data, you see the labels, e.g. msg_id, gloss, home_postcode etc. These labels are used for queries.

Examples:

- If you want to see the whole message 165380, your query would be *msg_id="165380"*
- If you want to find verbs in the present tense, your query is *tt_pos="VER:pres"*

To see the query-labels for the chat as well as all the labels available in a specific sub-corpus, check the information for the sub-corpus.

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