

# On The Function of Smiles and Laughter in Conversation - Some figures on their distribution with respect to dialogue acts

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## Introduction

Smiles (and laughter) have played an important part in the debate on the status of facial and other nonverbal expressions with respect to the expressive systems humans deploy. Are smiles expressive of an emotion or are they communicative symbols that people use ([Kraut & Johnston, 1979], [Jacobs et al., 1999])? Fridlund, in particular, has argued, from an ethological point of view, against the intimate connection between facial expression and emotion in the Darwinian/Ekmanian view.

The predominant account of human faces is actually a romanticist “two-factor<sup>1</sup>” one based upon outmoded conceptions of the mechanisms by which displays evolve. [...] Darwin’s influence on research on the face and emotion ironically isolated it from contemporary evolutionary, communicative views of signaling. [...] Nonhuman displays once thought reflexive are now considered social and communicative. [...] Human faces previously thought involuntary and emotional --- even in infants --- are now considered social and communicative. [...] Many of the faces made in solitude, once regarded as asymptotically emotional, are mediated by implicit or imaginary audiences. [...] Our new understanding of the origins and functions of human faces extends contemporary views of the “self” as dialogical and intrinsically social. [Fridlund, 1994]

Janet Bavelas’ program of research attempts to solidify this point of view by closely analysing the placement and function of nonverbal expressions in a dialogue context [Bavelas & Chovil, 1997]. In Chovil’s dissertation work, many conversational functions of facial expressions have been analysed in context (see [Chovil, 1991] for a summary). In this work she ignored smiles because they occurred too frequently in the corpus.

In this paper, we report on a small study of the distribution of smiles and laughter in the AMI corpus. We have focussed in particular on the dialogue acts that accompany them. It is not our aim to prove or disprove one or the other model describing the mechanisms behind facial expressions and the emotional and social determinants. Clearly, our research sympathises with the view that the social and interactional dimensions of facial expressions deserve more attention than they are given in the (still) dominant view on facial expressions that puts emotions first. However, describing the way expressions work in a social context, finding interactional determinants of behaviour cannot in itself tell us much about the internal mechanisms. Also the work of Jacobs, referred to above, remained inconclusive. Yes, there are social determinants, yes there are emotional determinants.

## The Analysis

We annotated one AMI meeting, with smiles and laughter and looked at what moments these episodes occurred with respect to several other features. We give two examples in this abstract. The first table below shows what or whom a person was looking at at the beginning of the start of a laughter or smiling episode. It shows, for instance, that a lot of the time one starts laughing or smiling when not looking at a person but at the table or the projection screen. When looking at a person, B starts smiling/laughing 204 times when looking at D, which is much less than the times he starts smiling/laughing when looking at either A (87 times) or C (92) times.

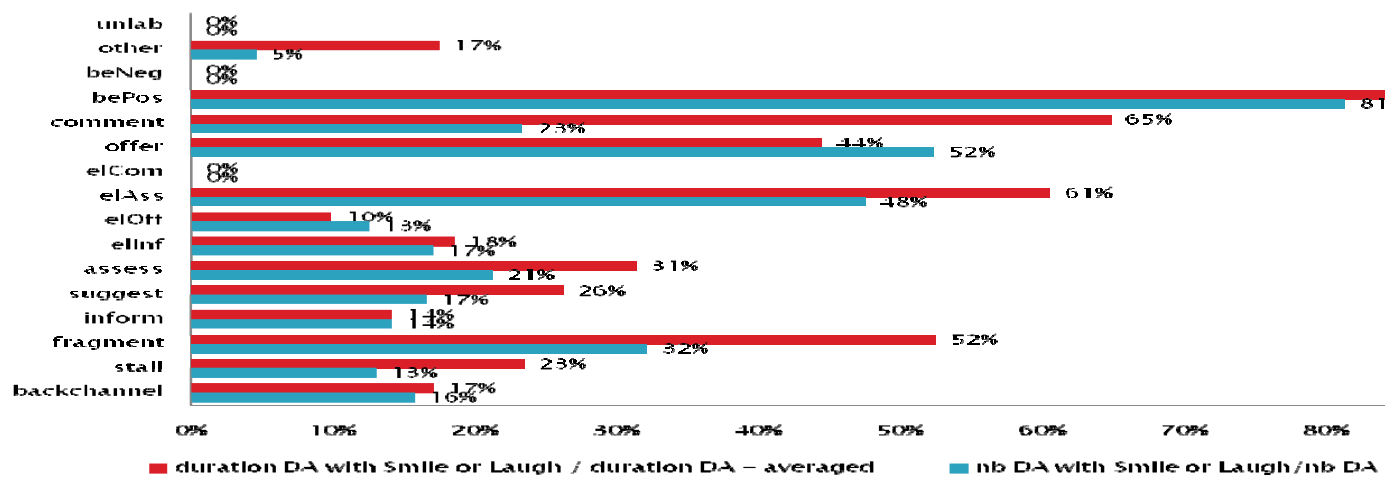
A – ME		B – ID	
Annotation	Occurrences	Annotation	Occurrences
B	71	A	87
C	103	C	92
D	71	D	204

<sup>1</sup> The two-factor model is the classical picture of Ekman saying that emotions lead (through neuroprograms) to facial expressions that may be suppressed through social display rules.

slide-screen	155	slide-screen	186
table	135	table	238
unspecified	26	unspecified	40

C – PM		D – UI	
Annotation	Occurrences	Annotation	Occurrences
A	103	A	12
B	51	B	95
D	165	C	165
slide-screen	5	slide-screen	134
table	201	table	136
unspecified	25	unspecified	42

The second table shows the distribution over smiles and laughter over dialogue acts. It shows that 81 percent of the bePOS dialogue acts are accompanied with a smile or laughter whereas only 23 percent of the comments about understanding were. An elicitation for an evaluative comment (elAss) is accompanied with a smile or laughter about 50 percent of the time whereas a simple question for information (elInf) only 17 percent. What social and interactional rules are operating here that can explain this? What other factors may be important? What other tables can shed light on this? ....



## References

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