

# humaine

Exemplars

WP 3: Theories and Models of Emotion

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Plenary meeting, 24-27 May 2005, Newcastle

# Towards exemplars

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- ◆ The exemplars are grounded on discussions that took place between WPs since the start of the funding period and allowed to draw a list of aspects that needed clarification.
- ◆ Three working groups (WGs) emerged from those interactions :
  - ➔ WG 1 “Conceptual and terminological clarifications”
  - ➔ WG 2 “Emotion models and computational modelling”
  - ➔ WG 3 “Communication skills”
- ◆ Current status:
  - ➔ participants and specific tasks have been defined
  - ➔ partial work schedule specified in end of year report (D0a)

## “Conceptual and terminological clarifications”

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- ◆ WG1.1 - Elaboration of operational definitions
  - ➔ for emotion-related concepts (‘design feature’ approach)
  - ➔ for emotion categories/dimensions (expert ‘grid study’ approach)
- ◆ WG1.2 - Evaluation of the actuarial occurrence of affective phenomena
  - ➔ joint questionnaire study in the **humaine** countries (R. Cowie)
  - ➔ Emotion and Health (swiss survey)
- ◆ WG1.3 - Assessing the semantic space of affect labels across languages
  - ➔ empirical study based on a systematic grid for comparison between **humaine** countries (languages) in collab. with ICCRA (presentation 4:30 - 5:00 pm, E. Roesch)

# 'Design feature' approach



<i>Design Features</i>	<b>Intensity</b>	<b>Duration</b>	<b>Synchro- nization</b>	<b>Event focus</b>	<b>Appraisal elicitation</b>	<b>Rapidity of change</b>	<b>Behavior impact</b>
<b>Types of Affect</b>							
<b>Emotions:</b> <i>angry, sad, joyful, fearful, ashamed, proud, elated, desperate</i>	●	●	●	●	●	●	●
<b>Moods:</b> <i>cheerful, gloomy, irritable, listless, depressed, buoyant</i>	●	●	●	●	●	●	●
<b>Interpersonal stances:</b> <i>distant, cold, warm, supportive, contemptuous</i>	●	●	●	●	●	●	●
<b>Preferences/Attitudes:</b> <i>liking, loving, hating, valuing, desiring</i>	●	●	●	●	●	●	●
<b>Affect dispositions:</b> <i>nervous, anxious, reckless, morose, hostile</i>	●	●	●	●	●	●	●

- ◆ The approach will be described in detail on the webportal, commentaries are requested

# Expert 'grid study' approach



- ◆ Identification of relevant features to characterize emotional responses
  - ➔ Evaluation (appraisals) of antecedent events
  - ➔ Features of physiological responses
  - ➔ Features of expressive responses
  - ➔ Action tendencies
  - ➔ Subjective feelings
- ◆ Identification of 'essential' emotion terms
  - ➔ Beyond 'basic' emotions
- ◆ Identification of experts in the Network
  - ➔ Experts will be requested to assess the identified features for the identified terms

## Emotion & Health (swiss survey)



- ◆ "Emotions in everyday life" published in *Social Science Information*
  - ➔ quasi-representative survey on the actuarial frequency of different emotions in Switzerland
  - ➔ critical commentary by Parkinson (UOXF), Ben-Zehev (HU), Goldie (KCL)

# Working Group 1 Contributors

## 4 Proposed allocation of tasks

### 4.1 WG1 “Conceptual and terminological clarifications” (led by Dr. David Sander, UNIGE)

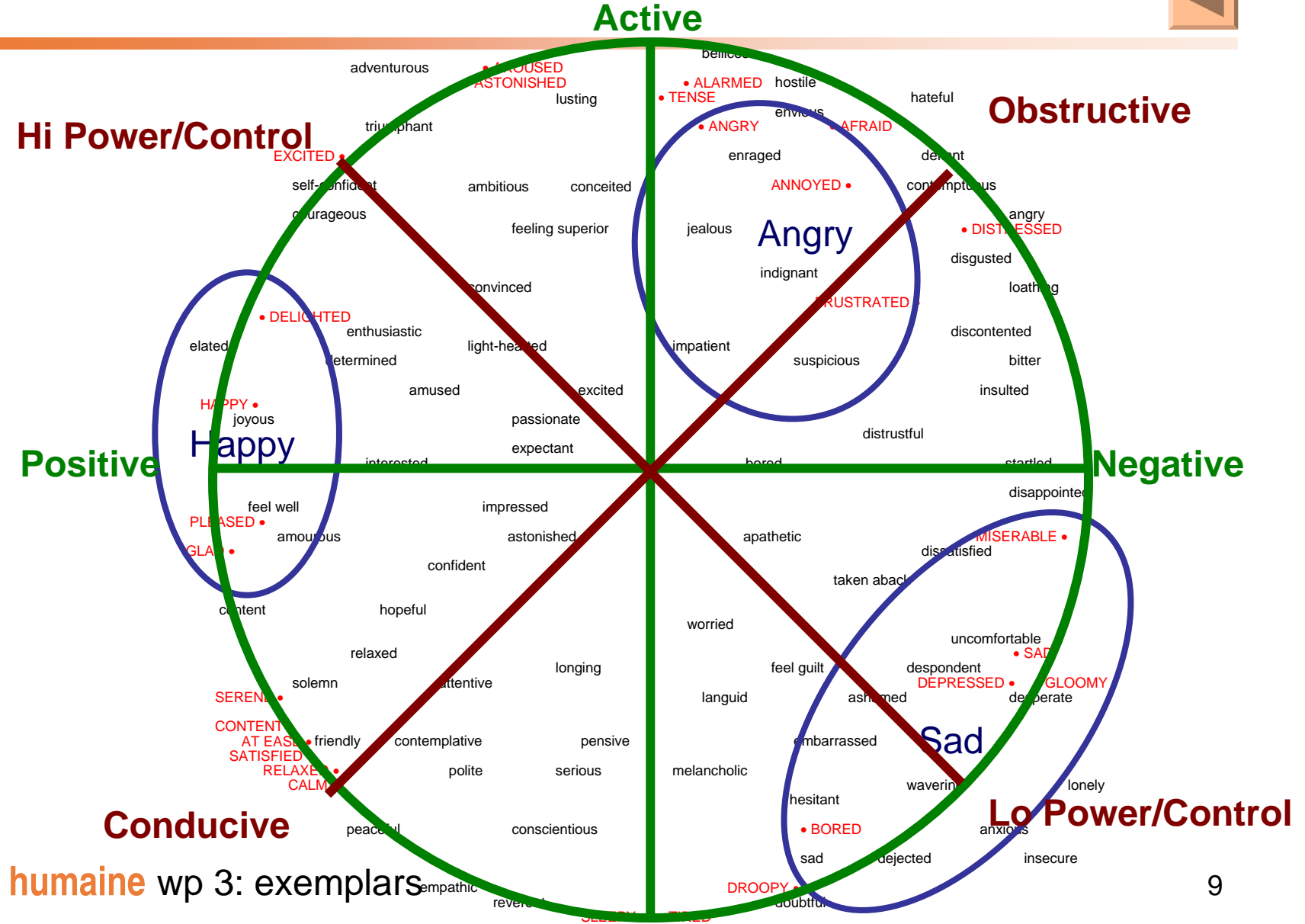
WG1.1 “Elaboration of operational definitions”			WG1.2 “Evaluation of the actuarial occurrence of affective phenomena”			WG1.3 “Assessing the semantic space of affect labels across languages”		
Project leader : Dr. David Sander (UNIGE)			Project leader : Prof. Roddy Cowie (QUB)			Project leader : Etienne Roesch (UNIGE)		
Individual	Affiliation	Commitment	Individual	Affiliation	Commitment	Individual	Affiliation	Commitment
David Sander	UNIGE	+++	Roddy Cowie	QUB	+++	Etienne Roesch	UNIGE	+++
Brian Parkinson	UOXF	+++	Anton Batliner	FAU	++	Klaus Scherer	UNIGE	+++
Roddy Cowie	QUB	+++	Laurence Devillers	LIMSI	++	David Sander	UNIGE	++
Winand Dittrich	UH	++	Aaron Ben-Ze'ev	HU	++	Tanja Bänziger	UNIGE	++
Etienne Roesch	UNIGE	++	Brigitte Krenn	ÖFAI	++	Winand Dittrich	UH	++
Klaus Scherer	UNIGE	++				Kostas Karpouzis	ICCS	++
Susanne Kaiser	UNIGE	++				Brigitte Krenn	ÖFAI	++
Tanja Bänziger	UNIGE	++				Laurence Devillers	LIMSI	++
Didier Grandjean	UNIGE	++				Elisabeth André	UA	++
Sabine Döring	KCL	++						
Peter Goldie	KCL	++						
Aaron Ben-Ze'ev	HU	++						
Ruhama Goussinsky	HU	++						
Shlomo Hareli	HU	++						
Shay Tzafrir	HU	++						
Marc Schröder	DFKI	++						
Stephan Rank	ÖFAI	++						
Lola Cañamero	UH	++						

# “Emotion models and computational modelling”

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- ◆ WG2.1 - Conceptualizing convergence across emotion models
  - ➔ establish a mapping between levels of analysis as offered by different theories and models of emotion
  - ➔ “what model for what purpose?”
- ◆ WG2.2 – “Blueprint for an affectively competent agent”
  - ➔ describe the mechanisms involved in emotional processing
  - ➔ dialog between disciplines (Psychology, Cognitive Neuroscience, Philosophy, Ethology, Computer Science)
  - ➔ state-of-the-art questions and attempts to address them
  - ➔ theory and implementation

# Mapping between levels of analysis



# Working Group 2

## Contributors

### 4.2 WG2 “Emotion models and computational modeling” (led by Prof. Klaus Scherer, Etienne Roesch, UNIGE)

WG2.1 “Conceptualizing convergence across emotion models”			WG2.2 “A blueprint for an affectively competent agent”		
Project leaders : Prof. Klaus Scherer, Etienne Roesch (UNIGE)			Project leaders : Prof. Klaus Scherer, Etienne Roesch (UNIGE)		
Individual	Affiliation	Commitment	Individual	Affiliation	Commitment
Klaus Scherer	UNIGE	+++	Etienne Roesch	UNIGE	+++
Etienne Roesch	UNIGE	+++	Klaus Scherer	UNIGE	+++
Susanne Kaiser	UNIGE	++	Stephan Rank	ÖFAI	+++
Didier Grandjean	UNIGE	++	Kostas Karpouzis	ICCS	+++
Lola Cañamero	UH	++	Lola Cañamero	UH	+++
Tanja Bänziger	UNIGE	++	Arnaud Blanchard	UH	+++
David Sander	UNIGE	++	René te Boekhorst	UH	+++
			Paolo Petta	ÖFAI	+++
			John Taylor	KCL	+++
			Roddy Cowie	QUB	++
			Fiorella de Rosis	BARI	++
			Valeria Carofiglio	BARI	++
			Tanja Bänziger	UNIGE	++
			Arjan Egges	UNIGE	++
			Didier Grandjean	UNIGE	++
			David Sander	UNIGE	++
			Aaron Ben-Ze'ev	HU	++
			João Dias	IST-INESC	++
			Guilherme Raimundo	IST-INESC	++
			Ana Paiva	IST-INESC	++
			Catherine Pelachaud	Paris8	++
			Jean-Claude Martin	LIMSI	++
			<i>Stacy Marsella</i>	<i>non-HUMAINE</i>	++
			<i>Jonathan Gratch</i>	<i>non-HUMAINE</i>	++
			<i>Christine Lisetti</i>	<i>non-HUMAINE</i>	++

- ◆ **WG3.1 – Assessment of labelling schemes**
  - ➔ labels (categories, dimensions) in the context of “emotional attributions” (qualification of nonverbal expressions)
  - ➔ a priori selection of labelling schemes
  - ➔ procedures used to ensure reliable and consistent labelling
  - ➔ relative to specific contexts (multimodal, “naturalistic”)
  
- ◆ **WG3.2 – Assess and compare the performance of human decoders & automatic recognition systems**
  - ➔ major issues: channel specific, context specific, dealing with confusions, comparison groups
  - ➔ compare performance of human observers and automatic classification system(s)

## Working Group 3 Contributors

### 4.3 WG3 “Emotional communication skills” (led by Dr. Tanja Bänziger, UNIGE)

WG3.1 “Reliability of labeling schemes” Project leader : Dr. Tanja Bänziger (UNIGE)			WG3.2 “Compare human/automatic recognition” Project leader : Dr. Tanja Bänziger (UNIGE)		
Individual	Affiliation	Commitment	Individual	Affiliation	Commitment
Tanja Bänziger	UNIGE	+++	Tanja Bänziger	UNIGE	+++
Susanne Kaiser	UNIGE	+++	Klaus Scherer	UNIGE	+++
Laurence Devillers	LIMSI	+++	Anton Batliner	FAU	+++
Ellen Douglas-Cowie	QUB	+++	Kostas Karpouzis	ICCS	++
Klaus Scherer	UNIGE	+++	Laurence Devillers	LIMSI	++
Cate Cox	QUB	++			
Ian Sneddon	QUB	++	Frank Panaget	FT	?
Jean-Claude Martin	LIMSI	++	Markus van Ballegooy	T-SYSTEMS	?
Anton Batliner	FAU	++	Stefan Steidel	FAU	?
Kostas Karpouzis	ICCS	++	Winand Dittrick	UH	?

# Description of the toolbox

## D3b, available on the portal

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- ◆ Aim: provide **humaine** researchers with a set of standard tools (Technical Annex)
  - ➔ Measurement instruments
  - ➔ Methods
  - ➔ Models
  - ➔ Questionnaires, scales
  
- ◆ An item in the toolbox should at least contain
  - ➔ a detailed description
  - ➔ comments from the community
  - ➔ concrete examples, results and further analysis
  - ➔ relevant descriptive articles

## Our analysis of the requirements

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- ◆ The toolbox should be made available to the broad public on the portal (Technical Annex)
- ◆ Everyone should be able to submit a tool
- ◆ Everyone should be able to comment a tool
- ◆ The toolbox should be structured in such a way as to allow users to browse and search through relevant tools
- ◆ A reviewing-like mechanism should be developed to allow a **humaine** “certification” of the tools that have proved to be most reliable and relevant for the community

## Collaborative effort between NCCR in Affective Sciences and **humaine**

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- ◆ The NCCR brings a unique opportunity to constitute a unified methodological toolbox in Affective Sciences, including
  - ➔ several measurement methods (e.g., physiological measures, brain imaging, self- and other-report)
  - ➔ different strategies (e.g., laboratory experiments, ambulatory and field assessment)
  - ➔ advanced multivariate and time-line data analysis
- ◆ **humaine** and the NCCR could create the synergy that is required to achieve excellence in methodological development

# Where should such a toolbox be located?

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