EMOTION COMMUNICATION

in instant messaging (IM)

by RENATA NORBUTAITE

Mini study

SMILIES and a number of times they were found in the survey

:) 9	:-) 3	:S 1
:P 6	;-) 1	:-(1
C_C (or similar) 1	:-$ 1	;> 1
^^ (or similar) 1	:D 5	:* 1
:/ 2	;) 4	:# 1
\,,/ (or similar) 1	:| 1	(k) 1
:Hus: (or similar) 1	happy smiley 1	(l) 1
:(5	sad smiley 1	*-) 1

Bibliography

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Topics covered

- Theory behind communication paths and emotion expression using computer
- Models of emotion classification and ideas behind them
- Experiments and results concerning emotion communication
- Some thoughts concerning human psychology

Communication paths

- Input-based communication

  rule-based approach;

- Output-based communication

  avatars; empathy; recognition;

- Complete emotion-over-IM systems

  emotional value; TCON;

Capturing emotions

- Self-report capturing
  - positive & negative emotions;
  - a mix of basic emotions;
- Concurrent expression capturing
  - cameras & microphones;
  - pressure sensors;

Expressing Emotions

- Visual expression

  avatars; emoticons;

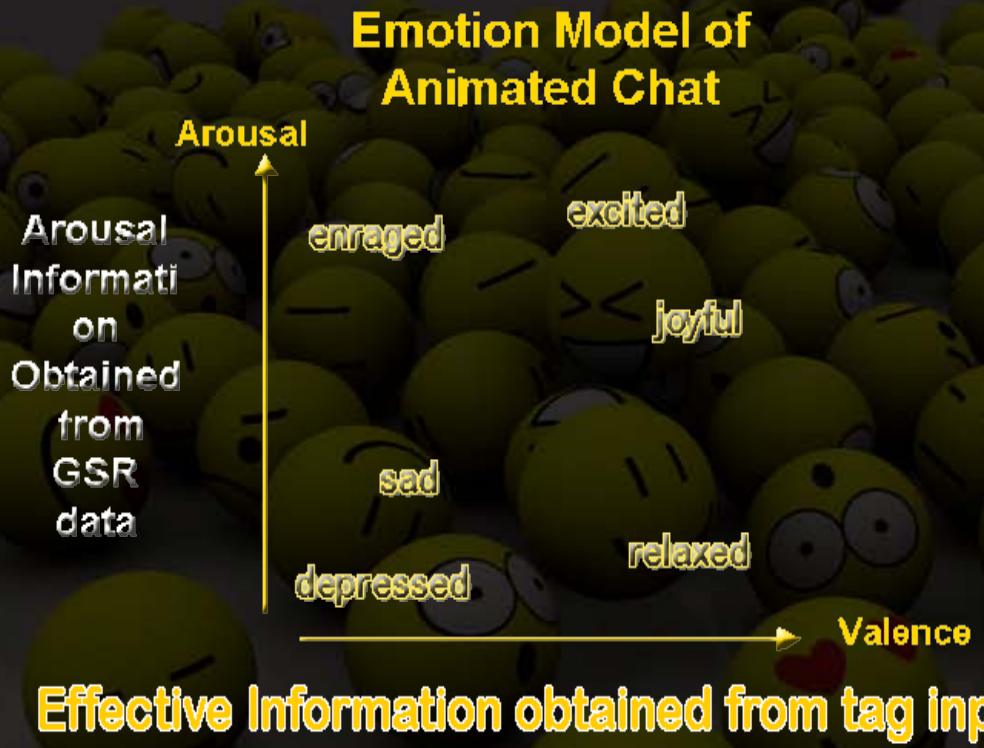
- Auditory expression

  pitch; prosody;

- Tactile expression

  forced-feedback systems;

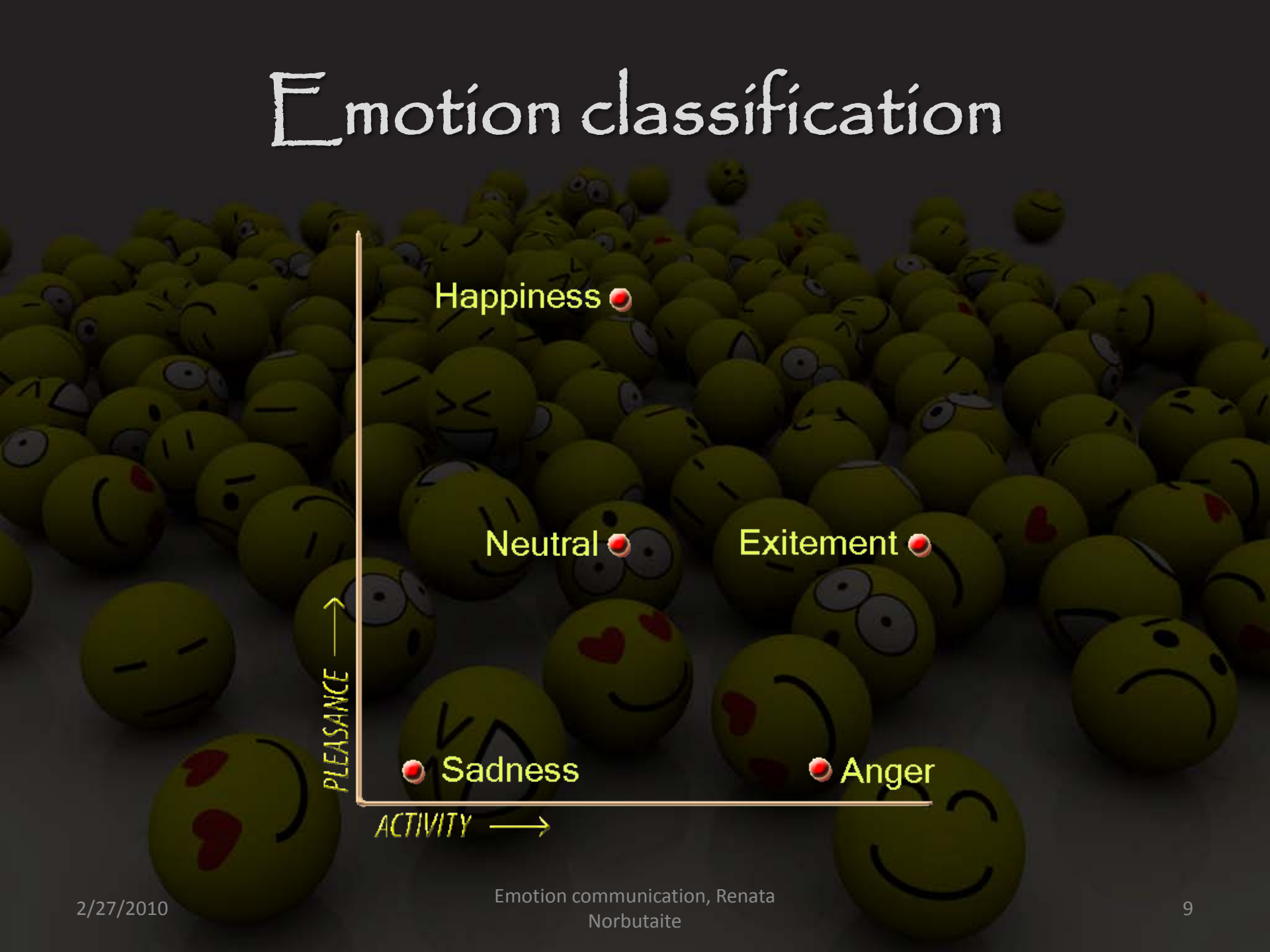
2-D model



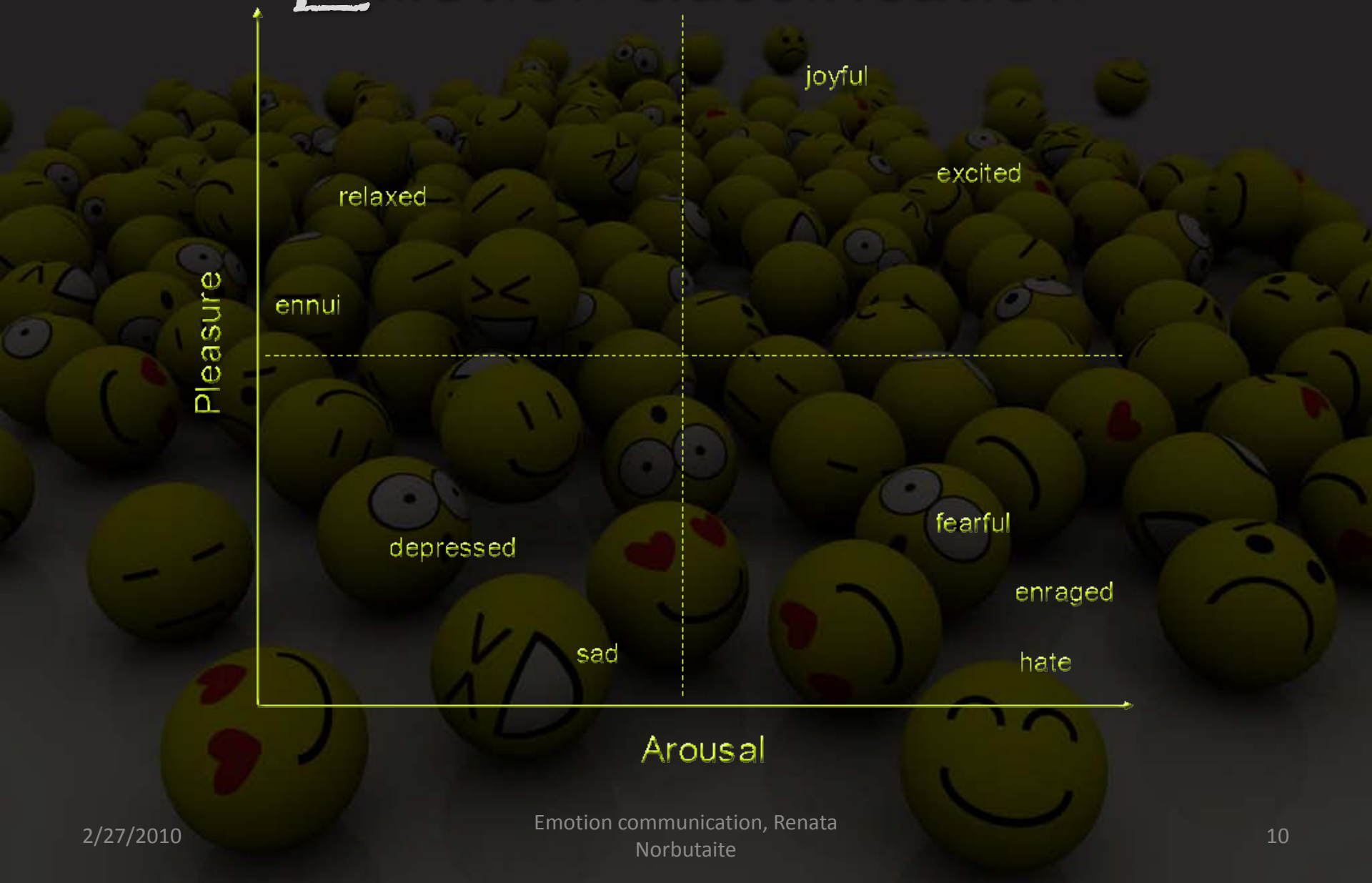
Arousal and valence can be determined from galvanic skin response (GSR) data and valence from blood volume pulse (BVP).

BVP increases with negative valence emotions, such as fear and anxiety, and decreases with relaxation.

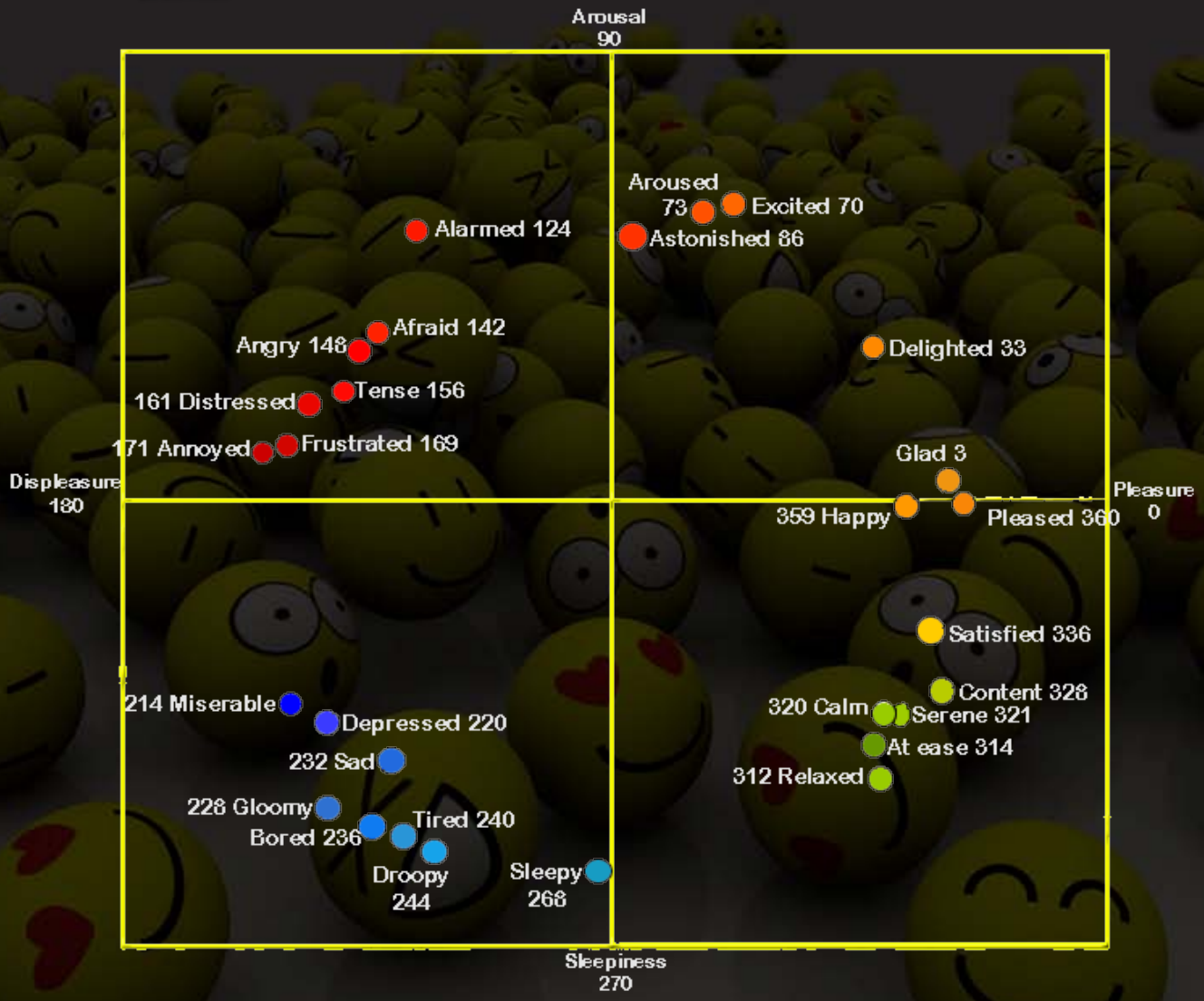
Emotion classification



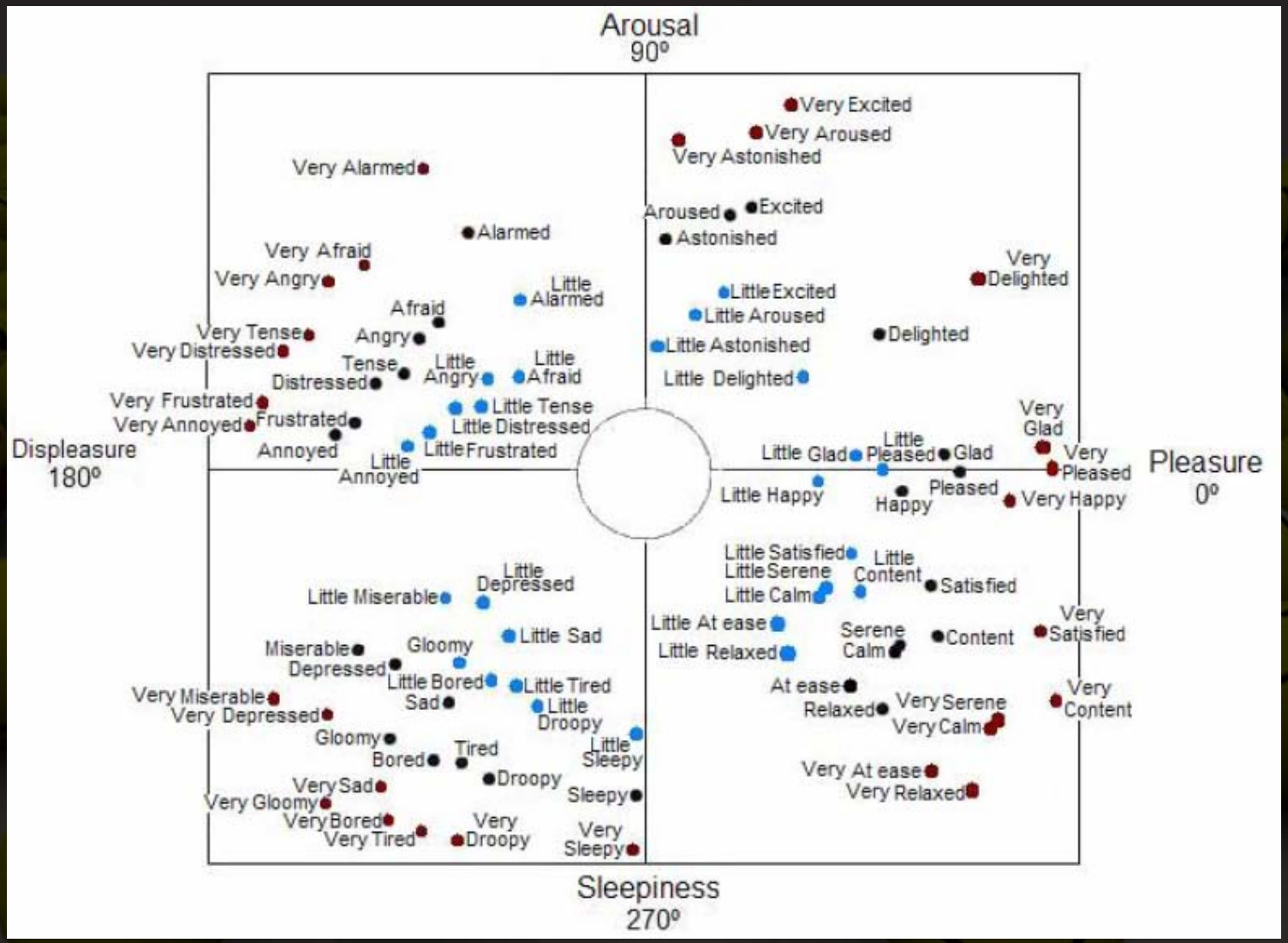
Emotion classification



Emotion classification



Emotion classification



Emotion classification

Results

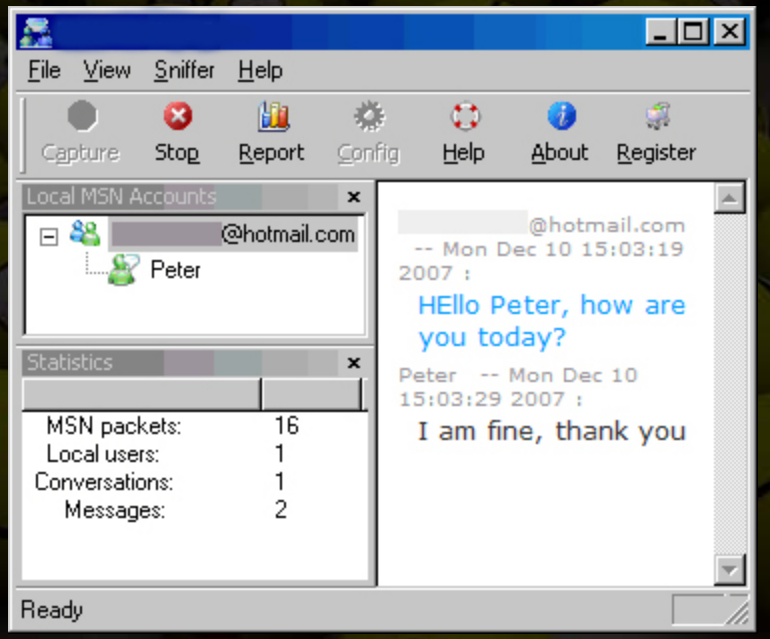
- 3-step emotion expression
- Russkman

Psychology

- Emotion grouping
- Empathy
- Emotion expression
- Meaning of words
- Emotion exposition

Experiment

Expressive vs. non-expressive communication



Results

User's experience:

	Expressive	Non-expressive
Involvement	22m. 50% more, 50% longer msg., 100% more items moved, 5 times more emoticons	20m.
Enjoyment	High enjoyment scores	A little bit more enjoyable
Presence	Higher spatial presence; higher interest in the content;	Higher believability and realism of the content
Performance	Quite good results	Slightly better
Usability	77.5%	78.4%

Conclusions

- People
- Theory
- Practice