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## EMOTION CATEGORIES IN LANGUAGE AND THOUGHT

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<b>Project</b>	Categories and concepts across language and cognition
<b>Task</b>	There are three core tasks: (i) naming emotions from facial expressions; (ii) naming emotions from scenarios, and (iii) matching scenarios to facial expressions.
<b>Goal of task</b>	To investigate cross-cultural emotional categories in language and thought
<b>Prerequisite</b>	To conduct this task you need – (i) a set of Ekman faces and optionally (ii) video stimuli called Mind Reading Emotions Library.

### Background: Emotion words and ineffability

#### 1. Context: Emotions across the disciplines

What are emotions? How can you distinguish them? Are they good or bad for rational thought? Could you have a morality without them? What is their evolutionary function? Are they purely internal or do they like perceptions reflect the external world? – these are the kinds of questions that litter the history of philosophy (see e.g. <http://plato.stanford.edu/entries/emotion/>). In psychology, William James had emphasised the somatic nature of emotions, Darwin the expressive biological basis, and Freud the centrality of these in human life (see e.g. entries in MIT Encyclopedia of the Cognitive Sciences). In the first decades of Cognitive Science, the affective side of mental life was relatively neglected, as attention was focused on human abilities that might yield to an algorithmic treatment, but largely through the impact of cognitive neuroscience the emotions are now in the foreground. Ekman and associates have played an important role in keeping the Darwinian perspective alive, and in persuading the cognitive science community that the subject is more orderly and tractable than it at first appears: there are, he claims, a small set of universal basic emotions with universal expressions reflecting adaptive “affect programs” like mating, defence, flight.

Meanwhile both psychologists and anthropologists have noted interesting culture-specific concepts embedded in local “ethnopsychologies”, with e.g. Ilongot *liget* tied to the intense emotions of headhunting, or Japanese *amae* linked to invoking love through displays of dependence. From this tradition of close attention to cultural detail has come severe criticism of Ekman’s basic emotions as universal human traits.

#### 2. Emotion labels: effables or ineffables?

Wittgenstein famously argued against the possibility of a private language (see <http://plato.stanford.edu/entries/private-language/>), i.e. a language whose terms referred only to internal private states, on the grounds that there would be no way to verify its extensions, let alone for another to learn them – I could never know, for example, whether my word for “anger” referred to the same thing on different occasions. Such arguments have not worried e.g. Jerry Fodor, but Wittgenstein had a point from a linguistic perspective: how can terms for inner states be learnt, and form a shared code?

In contrast to the rich philosophical speculation, the nature of natural language labeling of emotions has been relatively poorly explored, at least in a systematic way (see though e.g.

Wierzbicka 1999), despite the fact that many psychological investigations of emotions presuppose labels in one way or another. Our particular interest in emotion terms lies in their status as potential *ineffables*: linguistic expressions in which access to their referents cannot be directly shared. I can point to a colour and say “blue”, and thus you can learn the extension of “blue”, but there seems no way to point to “anger” (as opposed to its typical behavioural manifestations) in the same way. Even if there are a clear set of basic internal states (a la Ekman), it is not clear how the terms can be mapped onto them in an identical way by different learners. Equally, it is unclear how a foreigner (e.g. an anthropologist) could ever command the vocabulary of emotions.

There are two principal ways in which the meanings of terms like “anger” and “sadness” might perhaps be extrapolated by, e.g., a child learning a language from concrete situations. First, a child might be able to extrapolate the meaning by noting the causal event, and imagining what she herself would feel like if she was the affected protagonist in that event. Secondly, the child might directly inspect the demeanor and specifically the facial expression of the affected protagonist, and either know by virtue of Darwinian instinct (or some other direct mapping, like “mirror neurons”) or infer by identification, what the corresponding inner state was like.

These two aspects – the antecedent causal event, and the facial (or other) expression – therefore form the core of the field manual entries here. There has been an enormous body of work investigating the consistent recognition of facial expressions, spurred by Ekman and associates claim of a small universal set of emotions linked directly with pan-cultural facial expressions. Most of this work has used stimuli provided by Ekman, which are photos of actors enacting specific emotions given to them as English words. Typically, photos representing the hypothesised universal emotions are given to subjects in a forced choice – they must associate a photo with one of, say, 6 labels. On this basis recognition scores can be computed, and, on the basis of translation equivalents, compared across cultures. Complaints against the method include prejudged targets (‘basic emotions’), posed static faces, English-based labels, forced choice, contextless presentation and ecological invalidity. Nevertheless, even if concordant results could be due to task effects, failure to achieve high recognition scores across cultures might cast doubt on the theory of universal basic emotions, and for this reason amongst others variants of the technique have been much used.

In comparison, there has been relatively little investigation of the causal antecedents to emotions. In order to establish whether emotions are predictably related to certain antecedents, we have constructed a number of scenarios that target the Ekman “basic emotions” as well as other emotional experiences that are highly salient cross-culturally. The goal is to test whether there are clear associations between these scenarios and facial expressions, and the scenarios and emotion terms in different languages. The scenarios can also provide a way into the ethnography of affect in the culture under study when used as a rough elicitation device.

### **Research questions**

Is their evidence from language for a small set of universal basic emotions (c.f. colour words)? How “effable” are they – do consultants agree with one another intra-culturally? Are facial expressions or situations better cues for labeling? How well can people map situations to facial expressions?

## **Task**

There are three tasks in this section – (1) labeling facial expressions, (2) labeling scenarios, and (3) mapping scenarios to faces. You should conduct the tasks with the same consultants in a fixed order (1)-(2)-(3).

### ***Consultants***

Aim to test 10 participants.

### ***Stimuli***

(i) Facial expressions. You have a set of laminated cards with different facial expressions. There are 18 cards – 3 actors each posing 6 basic emotions. The cards have an ID number on the bottom corner.

P1, P2, P3, P4, P5, P6 – the practice cards.

F1, F2, F3, F4, F5, F6 – experimental cards of a female face.

M1, M2, M3, M4, M5, M6 – experimental cards of a male face.

(ii) Scenarios eliciting emotions. The full list is at the end of this field manual entry.

### ***Procedure***

Remember to video~audio-tape your session.

(1a) Facial expressions – Establish the “cultural frame” towards reading faces.

From last year’s pilot work, it appears that cultures differ in the default frame they bring to “reading” faces. Rossel Islanders appear to view pictures of the face as expression some communicative act, while Laotians describe the face as an object, expressing the particularities of the facial features. We would like to know if there is a systematic frame – within and across cultures – that people use when interpreting the face.

Collect together all 6 facial expression pictures with the code “P” on the bottom corner. Show them to your consultant in a fixed order 1-6 and ask your consultant *How does the face look?* Do not give any additional prompting. Allow the consultant to describe the pictures as they will. This will provide us with information about how people read the face as a default – do they provide emotion attributions, interactional interpretations, facial descriptions, or something else?

(1b) Facial expressions – Focus on emotion attributions.

Now present your consultant with the experimental pictures – these are series F and M. Present them F1-F6 followed by M1-M6. Ask your consultant *How does she/he feel?* If your consultant does not provide an emotion term use additional prompting until they do. We are interested in the most concise emotion term attributed to each facial expression. If you get only long descriptions ask *Is there a word for that feeling?*

(2) Scenario-emotion attribution.

At the end of this entry are 20 scenarios. You will have to translate the scenarios into the local language. After describing each scenario try to get a single word or phrase that captures the relevant emotion. We are interested in the most concise emotion term attributed to each scenario, as we were with the facial expressions.

(3) Scenario to facial expression mapping.

Lay out on a surface all 6 of the “P” series of pictures. They should all be easily visible to the consultant. Now go through the list of scenarios again and ask the consultant *If that*

*happened to Ramu how would he look? Show me which face he would have?* Record the response (P1, P2, etc. – “none of the faces are applicable” is also an option).

### **Analysis**

For the main experimental section, we hope to do quantitative analyses of each of the sub-tasks.

### **Outcome**

Depending on the results individual publications may be possible. A joint publication synthesizing the results will follow.

### **Optional post-task elicitation**

An optional task to elicit emotion vocabulary would be to collect descriptions of the video stimuli in the “Mind Reading Emotions Library (MREL)”. These videos depict a causal antecedent and facial expression together as a dynamic scenario. They may be more appropriate for eliciting reference to emotions than stills of emotive facial expressions. Make sure that the MREL is installed on your laptop. (You will need to ask the TG to install this program on your computer.) Start the program. When the “emotion groups” come up, go to the bottom of the screen and make sure that you are in level 1 (there are 6 levels in total). Start with the first clip on the upper left of your screen – there you will find “afraid emotions”. First show your consultant the clip with the “afraid situation”. Ask her/him to watch carefully and after s/he has seen the clip ask the following questions:

- (a) What does s/he feel?
- (b) How does the face look?
- (c) What kind of person is s/he?
- (d) What might s/he (the protagonist in the film) say?

Then click on the photo besides the “afraid situation clip”. You see a woman in a red shirt on top of a frame with 6 photos. First click the first photo on the top left within this frame (the still shows the same woman), play the clip for your consultant (you see it on the top right of the frame with the stills) and then ask the same questions (a-d). Then go to the picture at the right of this still (in the first afraid emotion images the still shows a man in a dark green shirt), click on the photo, show the clip to your consultant and ask the same questions again. Go back to the main menu with the level 1 emotions (click “main” on the bottom of the frame). Go to the next still to the right, and follow the same procedure again.

The series of emotions (Level 1) which you will play to your consultants is:

1	afraid situation	11	liked situation
2	angry situation	12	sad situation
3	bored situation	13	sneaky situation
4	disgusted situation	14	sorry situation
5	excited situation	15	sure situation
6	fond situation	16	surprised situation
7	happy situation	17	thinking situation
8	hurt situation	18	unfriendly situation
9	interested situation	19	unsure situation
10	kind situation	20	wanting situation

After completing your data elicitation go to “menu” on the bottom of the frame, click and quit.

### **References**

- Simon Baron-Cohen et al. (2003). *Mind Reading, the interactive guide to emotions*. Cambridge: University of Cambridge.
- Wierzbicka, A. (1999). *Emotions across Languages and Cultures: Diversity and Universals*. Cambridge: Cambridge University Press.

### **Scenarios designed to elicit emotion words in cultural scripts.**

Remember these scenarios serve two functions – (1) to elicit short emotion descriptions and (2) to establish the mapping of scenarios to facial expressions. Ask your consultant to imagine the following scenarios happening, in which a stimulus event affects a friend of the consultant (call him Ramu, or whatever is appropriate). You may have to adjust some details of the scenario so that it is culturally appropriate (e.g. where a list of objects is given choose the most fitting for the target event – make sure to keep a note of the exact wording and phrasing used! And be consistent once a particular frame has been adopted; don't change objects when asking different consultants).

[N.B. If you wish to do further elicitation then ask (a) what would Ramu be thinking?, (b) what would onlookers be thinking and feeling, and (c) what would people do?, (d) is there a name for this kind of event? (e) why do people feel and act as they do in this situation? This additional elicitation need not be done with all 10 consultants.]

(1) While he is away, Ramu's mother dies suddenly from an unknown disease. When he returns, someone tells him.

TARGET: GRIEF/SADNESS

(2) A long time ago Ramu helped a stranger who lost his belongings to get on a ship/bus to go home. He almost had forgotten this when suddenly the man came to his village, thanked Ramu for his help and gave him a big present.

TARGET: SURPRISE (positive outcome)

(3) While Ramu is away, his home burns down. He returns to find it in ashes.

TARGET: SURPRISE (negative outcome)/SHOCK

(4) Ramu's wife has just given birth to a child. The midwife gives the child to R to hold it.

TARGET: JOY/HAPPINESS

(5) Ramu has been away working in the city/other place for six months. He walks into the village after being away for so long and his children run and jump on him.

TARGET: LOVE, JOY

(6) Ramu wants to eat some of the leftovers of yesterday's meal. When he opens the cooking pot he sees that it is full of cockroaches and maggots.

TARGET: DISGUST

(7) Ramu has a favorite pot/necklace/amulet that his grandfather gave him. A village boy picks it up and breaks it.

TARGET: ANGER

(8) Ramu is walking home through the forest/on the mountain in the dark. Suddenly he hears a loud noise nearby and sees that something is moving quickly towards him.

TARGET: FEAR

(9) Ramu's aunt had never married. Wherever she went, she brought bad luck – babies got ill, food spoiled, families quarreled. One day, his aunt came to Ramu's door.

TARGET: FEAR/ANGER?

(10) Climbing up a tree Ramu tore his trousers to pieces. The remaining cloths can hardly cover his nakedness. On his way back home a group of girls and young women see him.

TARGET: SHAME/EMBARASSMENT

(11) Ramu hears that his father is going to give his favorite axe to a boy in the other family because he says his son is rubbish.

TARGET: TO BE DISHONORED

(12) Ramu has met with Meri a few times. He likes her very much and wants her to be his friend. He goes to her house and sees that she is sitting very close with another man, laughing and chatting with him.

TARGET: JEALOUSY

(13) Ramu finishes repairing his shabby old truck. Suddenly a guy who went to work in the city some time ago returns to their village in a brand new car with a beautiful girl by his side and lots of presents for his relatives.

TARGET: ENVY

(14) Ramu attends church and the missionary has been preaching for almost an hour, repeating the same thing over and over again.

TARGET: BOREDOM

(15) Despite the fact that Ramu had worked very hard all day his father accuses him of being lazy when he comes back from work in the company of his friends.

TARGET: INDIGNATION

(16) Ramu is carrying a big and heavy log. The end of the log strikes something and someone starts to cry violently. He looks over and sees that the log hit a branch of a tree and that a boy is crying because his water bottle fell and is smashed to pieces.

TARGET: RELIEF

(17) Ramu goes hunting/fishing/shopping, and comes back with a big bird/fish/bargain. He shows it to his father.

TARGET: PRIDE

(18) Ramu has been in a distant city for a year and sees a photograph of his village in a book/newspaper.

TARGET: HOMESICKNESS

(19) Ramu accidentally broke his favorite machete/musical instrument which he had had for a long time.

TARGET: REGRET

(20) Ramu started off walking to visit a village. His boss stops and asks him if he wants a ride in his car/canoe/camel but Ramu knows that his boss would have to go out of his way to take him to the village.

TARGET: RETICENCE TO IMPOSE