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EMOTION CATEGORIES IN LANGUAGE AND THOUGHT
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Project   Categories and concepts across language and cognition

Task   There are three core tasks: (i) naming emotions from facial expressions; (ii) naming emotions from scenarios, and (ii) matching scenarios to facial expressions.

Goal of task To investigate cross-cultural emotional categories in language and thought

Prerequisite 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 emphasized 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 that 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 m any psychological investigat ions of e motions presuppose labels in one way or another. Our pa rticular interest in emotion terms lies in their status as potential *ineffables*: linguistic expressions in which access to their ref erents cannot be directly shared. I can point to a co lor and say "blue", and thus you can learn the extension of "blue", but there seems no way to point to "ange r" (as opposed to its typical behavioral manifestations) in the sam e way. Even if there are a clear set of basic internal states (a la Ekm an), it is not clear how the terms can be m apped onto them in an ide ntical way by different learners. Equally, it is uncle ar how a foreigner (e.g. an anthropologist) could ever command the vocabulary of emotions.

There are two principal ways in which the m eanings of term s like "anger" and "sadness" might perhaps be extrapolated by, e.g., a child learning a language from concrete situations. F irst, a child m ight be a ble to ex trapolate the m eaning 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 m ight directly inspect the demeanor and specifically the facial expression of the affected protagonist , and either know by virtue of Darwinian instinct (or som e other direct m apping, like "mirror neurons") or infer by identification, what the corresponding inner state was like.

These two aspects – the anteceden t causal even t, and the facial (o r other) expres sion – therefore form the core of the field manual entries here. There has been an enormous body of work investigating the cons istent recognition of facial expressions, spurred by Ekm an and associates claim of a sm all universal set of emotions linked directly with pan-cultura l facial expressions. Most of this work ha s used stim uli provided by Ekm an, which are photos of actors enacting specific em otions gi ven to them as English words. Typically, photos representing the hypothesized universal em otions are given to subjects in a forced choice – th ey must associate a photo with one of, say, 6 labels. On this basis reco gnition scores can be com puted, and, on the basis of translation equivalents, com pared across cultures. Complaints against the method in clude prejudged targets ('basic em otions'), posed static faces, Eng lish-based labels, fo rced choice, contextless p resentation and ecological invalidity. Nevertheless, even if concor dant 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 com parison, there has been relatively little investigation of the causal antecedents to emotions. In order to estab lish whether em otions a re predic tably rela ted to c ertain antecedents, we have constructed a num ber of scenarios that target the Ekm an "basic emotions" as well as other em otional experiences that are highly salient cross-cu lturally. The goal is to test whether there are clear a ssociations between these sce narios and facia l expressions, and the scenarios and emotion terms in different languages. The scenarios can also provide a way into the ethnography of a ffect in the culture under study when used as a rough elicitation device.

Research questions
Is their evidence from language for a sm all se t of universal basic emotions (c.f. color words)? How "effable" are they – d o consultants agree with one another intra-culturally ? Are facial expression s o r situ ations better cues for labeling? How well can people m ap 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 th e 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 publicatio   ns m ay 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 th e "Mind Re ading Emotions Libra ry (MREL)". These vide os depict a causal antecedent and facial expression to   gether as a dynam ic scenario. They m ay be more appropriate for eliciting reference to e   motions than stills of e motive facial expressions. Make sure that the MREL is ins talled on your laptop. (You will need   to ask the T G to install this program on your com puter.) St art the program . W hen the "em otion groups" come up, go to the bottom of the screen and m ake 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 s ituation clip". You see a wom an in a red shirt on top of a fram e with 6 photos. First click the first photo on the top left within this frame (the still shows the sa me woman), play the c lip for your consultant (you see it on the top right of the fram e with the st ills) and then ask the sam e que stions (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 sam e 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 inte	rested situation		19 unsure	situation
10 kind	situation		20 wanting	situation

After completing your data elicitation go to "m enu" on the bottom of the fram e, click and quit.

References

Simon Baron-Cohen et al. (2003). Mind Reading, the intera   ctive guide to em   otions. 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 tw o functions – (1) to elicit short em otion descriptions and (2) to establish the m apping 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 m ay have to adjust som e details of the scenario so that it is cultura lly appropriate (e.g. where a list of objects is given choose the m ost fitting for the target ev ent – m ake sure to keep a note of the exact wording and phrasing used! And be consistent once a particular fram e has been ado pted; 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 f eel and act as they do in this situation? This additional elicitation need not be done with all 10 consultants.]

(1) While he is away, Ra mu's mother dies suddenly from an unknown disease. W hen 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 hom e. He alm ost had forgotten this wh en suddenly the m an ca me to his village, thanked Ramu for his help and gave him a big present.
TARGET: SURPRISE (positive outcome)

(3) While Ramu is away, his hom e burns do wn. He returns to f ind it in a shes.
TARGET: SURPISE (negative outcome)/SHOCK

(4) Ramu's wife has just given bi rth to a child. The m idwife gives the child to R to ho ld 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 an d his children run and jum p on him .
TARGET: LOVE, JOY

(6) Ramu wants to eat so me of the lef tovers of yesterday's m eal. 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 hom e through the forest/ on the m outain in the dark. Suddenly he hears a loud noise nearby and sees that something is m oving quickly towards him .
TARGET: FEAR

(9) Ramu's aunt had never m arried. 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 rem aining 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 tim es. He likes her very m uch and wants her to be his friend. He goes to her house and sees that sh e is sitting very cl ose with another man, laughing and chatting with him.
TARGET: JEALOUSY

(13) Ramu finishes repairing his shabby old tr uck. Suddenly a guy who went to work in the city some tim e ago returns to the ir 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 m issionary has been preach ing for almost an hour, repeating the same thing over and over again.
TARGET: BOREDOM

(15) Despite the fact that Ramu had wor ked 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. Th e end of the log strikes som ething 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 s ees a photo graph of his villag e in a book/newspaper.
TARGET: HOMESICKNESS

(19) Ramu accidentally brok e his favorite m achete/musical instrument whi ch he had had for a long time.
TARGET: REGRET

(20) Ramu started off walking to visit a v illage. His boss stops and asks him if he wants a ride in his car/canoe/camel but Ramu knows that his boss woul d have to go out of his way to take him to the village.
TARGET: RETICENCE TO IMPOSE