

Automatic Recognition of Emotional Subgroups in Images

Emmeke Veltmeijer, Charlotte Gerritsen and Koen Hindriks

A Exclusion Criteria Images

Excluded are images that show:

- (a) only people standing arm in arm/in a line (as they form one posing group);
- (b) static family photos without any people in the background (forming one posing group);
- (c) demonstrations with readable slogans on banners, to avoid controversy when having these images annotated;
- (d) collages or overprints;
- (e) groups with a common goal, e.g. where everyone is shouting or applauding;
- (f) groups with a common focus point, e.g. where everyone is looking at the same point on a stage.

B Labeling Instructions

B.1 Subgroup Recognition

Instructions To assign each person in an image to a social group (solo groups also possible). That means that if you think some people in the picture belong to the same social group (at the moment the picture was taken), you assign them to the same group. Only people with visible faces have to be included. We are interested in your interpretation, so don't think too long about your estimation.

After annotating the subgroups, please select all factors that were important for your division into groups, choosing from:

- Distance to each other
- Interaction
- Facial expressions
- Body language
- Context (such as surroundings/location)
- Other, ...

Information given People might belong to the same social group if they are walking or talking together, otherwise engaging, or seem to be oriented towards one another. Some examples of one or multiple subgroups, along with possible reasons to label as such, are also provided.

B.2 Emotional Subgroup Recognition

Instructions To assign each person in an image to an emotional subgroup. An emotional subgroup is a social group that shares an emotion. This means that if you think some people in the picture belong together while also expressing a similar emotion (at the moment the picture was taken), you assign them to the same emotional subgroup with the emotion of choice (choosing from positive, neutral, and negative). Only people with visible faces have to be included. We are interested in your interpretation, so don't think too long about your estimation.

After annotating the emotional subgroups, please select all factors that were important for your division into emotional subgroups, choosing from:

- Distance to each other
- Interaction
- Facial expressions
- Body language
- Context (such as surroundings/location)
- Other, ...

Information given People might belong to the same social group if they are walking or talking together, otherwise engaging, or seem to be oriented towards one another. This means that if you see a group of people that seem to belong together, but some are happy and some are not, that the happy people form an emotional subgroup and the 'not so happy' people form an emotional subgroup (with different emotion labels). Also, when you see two groups of people that are at a distance from each other and not interacting (so not forming a social group), but they all express similar emotions, they form two separate emotional subgroups (both with the same emotion label). Some examples of different emotional subgroups, along with possible reasons to label as such, are also provided.

B.3 Emotion Recognition

Instructions To assign an emotion to each person visible in an image. This means that you estimate how each person is feeling (at the moment the picture was taken), choosing from positive, neutral, and negative. Only people with

visible faces have to be included. We are interested in your interpretation, so don't think too long about your estimation.

After annotating the individual emotions, please select all factors that were important for your choice of emotions, choosing from:

- Facial expressions
- Body language
- Context (such as surroundings/location)
- Other, ...

Information given No extra information on how to assess emotions is given, as the task is relatively straightforward and we are interested in people's own interpretation. Some examples of different emotions, along with possible reasons to label as such, are also provided.