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# Whether you are smart or kind depends on how I feel: The influence of positive and negative mood on agency and communion perception

**Abstract:** Feelings-as-information theory states that feelings inform us about the nature of our current situation and we rely on them to make our judgments. Beyond that, feelings tune our cognitive processes to meet situational requirements. Positive feelings result in relying on pre-existing knowledge structures and default strategies, whereas negative feelings hamper relying on routines and results in adapting systematic processing. Based on this premise, it was hypothesized that positive mood, elicited either by the perceived target or by the independent source, would lead to relying on accessible agentic or communal content in perceiving strangers, as well as familiar others, whereas negative mood would weaken these tendencies. Specifically, the three studies showed initial evidence that (a) positive mood leads to focusing on agency-related qualities in perception of unknown men to a greater extent than negative mood, (b) positive mood leads to focusing on communion-related qualities in perception of unknown women more than negative mood, and (c) positive mood leads to relying on communal content in perception of familiar others comparing to negative mood.

**Key words:** agency, communion, feelings-as-information, social perception

Agency and communion, as two fundamental dimensions of social perception, have proved to play an important role in a vast majority of psychological domains (Abele & Wojciszke, 2007; Fiske, Cuddy, & Glick, 2007; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005). Communion – the bigger one of the Big Two (Abele & Bruckmüller, 2011) – is especially important in the perception of others (Brambilla, Rusconi, Sacchi, & Cherubini, 2010; De Bruin & Van Lange, 1999; Wojciszke, Bazinska & Jaworski, 1998), while agency plays a crucial role in processes of self-perception (Abele & Wojciszke, 2007) and self-esteem (Wojciszke, Baryła, Parzuchowski, Szymkow, & Abele, 2011). Despite of enormous number of data, hardly any research have investigated the influence of mood on agency and communion perceptions. Few contributions that appeared (e.g. Abele, Rupperecht, & Wojciszke, 2008), have not tested this issue directly. The presented studies suggest that mood is an important factor that should be taken into consideration when studying the Big Two phenomena.

### The effects of mood on social judgment

One of the recent major developments within the field of social cognition is the growing influence of functionalist theories which question the central tenets of social cognition and draw attention to the adaptive and dynamic nature of social cognitive processes (Forgas, Fiedler, & Sedikides, 2013; Semin, Garrido, & Palma, 2013). As a consequence, more and more thinking is devoted to the emotional and motivational processes that loom large when people interact with their environment (Smith & Conrey, 2009). Affective influences on cognition are less likely to be considered as “affective biases” and the interdependence of affect and cognition is being advocated (Clore, Gasper, & Garvin, 2001). There are clearly two approaches to understanding the evaluative judgment process (Clore et al., 2001). One approach assumes that evaluative judgments reflect evaluative beliefs – if I consider Jack to be friendly and kind, then I find him likeable (Anderson, 1971; Fishbein & Ajzen, 1975). The other one focuses on affective reactions

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rather than beliefs (Clore & Byrne, 1974) and posits that interpersonal attraction depends not only on attributes of the person judged, but also on how the perceiver reacts emotionally to those attributes (Clore & Gormly, 1974; Clore et al., 2001). In this view liking for Jack would be an effect of enjoying his company. This feeling-as-information approach (Schwarz, 2012, for a review) has proved to be a robust one – an approach that accounts for a variety of phenomena (Clore et al., 2001).

Contrary to traditional accounts of judgment and decision making, feeling-as-information approach holds that people often make their judgments by simply asking themselves (implicitly): “How do I feel about it” (Schwarz & Clore, 1988; Wyer & Carlston, 1979). The fundamental assumption is that elicited feelings are felt and the experience of any kind of affect serve as affective feedback that guides judgment, decision making, and information-processing. As Schwarz (2012) points out, people are more sensitive to their feelings than to where their feelings come from, so what they feel at the moment is experienced as spontaneous personal reaction to whatever is in the focus of their attention. Consequently, experienced feelings can provide valid information in case the affect has been elicited by the object of judgment, or misleading information, when the feeling is due to some other source (e.g. the weather, Schwarz & Clore, 1983). Importantly, people draw on their emotional experiences as a source of information as long as their informational value is not discredited (Schwarz & Clore, 2007). Once we become aware that what we feel results from incidental source other than the target of judgment, the influence of our experiences is eliminated (e.g., Schwarz & Clore, 1983).

The informative function of emotional experiences has been shown to be more general than assumed in the initial studies on evaluative judgment (Schwarz, 1990; Schwarz & Bless, 1991; Schwarz, 2012). Bad moods usually signal that the situation is problematic while positive moods indicate that everything is fine. To the extent that our cognitive processes are tuned to meet the processing requirements of given situation (Smith & Semin, 2004), it can be assumed that happy moods will foster different processing strategies comparing to sad moods. As have been shown, happy moods foster top-down processing style that relies more on general knowledge structures (e.g., Isen, Means, Patrick, & Nowicki, 1982), while sad moods foster systematic processing style characterized by bottom-up processing and attention to details (Clore, Schwarz, & Conway, 1994; Schwarz, 2002). Furthermore, the same effects can be caused by any information that signals a benign or problematic situation. It can be the face of the target person (Ottati, Terkildsen, & Hubbard, 1997), bodily sensations (Friedman & Förster, 2000) or metacognitive experiences (Song & Schwarz, 2009), such as accessibility experiences (Schwarz et al., 1991; Haddock, Rothman, Reber, & Schwarz, 1999) or processing fluency (Alter & Oppenheimer, 2006; Song & Schwarz, 2009). As Clore et al. (2001) emphasize, positive feelings work as rewards and thus reinforce relying on accessible contents and cognitive styles in use. Negative feelings, on the other hand, work as

punishment and inhibit default strategies. In other words, when things go smoothly in the situation, we are likely to rely on our knowledge structures and routines, which served us well in the past. However, if things go roughly, we abandon our routines and focus on the details of situation to better adjust our reaction (Schwarz, 2012). Thus, when it comes to perceiving others, perceivers experiencing positive feelings are more likely to draw on stereotypic knowledge about social categories, whereas in case of experiencing negative feelings this tendency is hampered, as perceivers attend to specific behaviors of a target person (Bless, Schwarz, & Kimmelmeier, 1996; Bodenhausen, Kramer, & Süsser, 1994). It could be predicted then, that subjective experiences would also influence the judgments people make using two fundamental dimension of social perception, namely agency and communion.

### **Agency and communion in person perception**

There is much evidence that people base their judgments of the self, other persons, and groups on two independent dimensions – agency and communion (Cuddy, Fiske, & Glick, 2008; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005; Wojciszke, 2005). When making judgments of others, people use to give more weight to communal rather than agentic information (Abele & Wojciszke, 2007; Brambilla, Rusconi, Sacchi, & Cherubini, 2010; De Bruin & Van Lange, 1999; Wojciszke, 1994). As this effect is apparent at every stage of impression formation it can be argued that focusing on communal content is the default strategy in perceiving others – the information about a target’s honesty or trustworthiness is more important as it tells us more about potential benefits or harms than any information about the target’s agency. Apparently, it is evident in empirical investigations: people show higher chronic accessibility of communal than agentic traits in the process of person perception (Wojciszke, Bazinska, & Jaworski, 1998; Ybarra, Chan, & Park, 2001), process the communal information faster than agentic one (Abele & Bruckmüller, 2011) and are able to make more reliable communal than agentic judgments of others even after very short exposures (Willis & Todorov, 2006). Therefore, in accordance to the feelings-as-information theory, positive moods should enhance this default strategy in perception of others, while negative moods should hamper this tendency by lowering the importance of communal traits. However, this simple prediction has its obvious limitations as when we perceive the person we perceive a woman or a man. To the extent that perceivers initially categorize others, their immediate judgments are influenced by category in use (e.g., the target’s sex; Fiske & Neuberg, 1990) and this process is enhanced by positive mood (Schwarz, 2012). Thus, in case of newly met others, we should predict that when in positive feelings people would use their general knowledge about males and females, what will result in making stereotypical judgments. In case of people we know, this sex effects should not be evident.

The content of gender stereotypes elegantly falls into categories of agency and communion. The cross-cultural data indicate that the male stereotypes reflect such qualities as dominance, autonomy, aggression and achievement (agency) while female stereotypes consist of traits like deference, nurturance and affiliation (communion; Williams, Satterwhite, & Best, 1999). Furthermore, perceivers generally assume that men are oriented toward agentic goals and women toward communal goals (Bem, 1974; Williams & Best, 1990). Thus, it could be predicted that people in positive mood would focus on stereotypically female characteristics (communal traits) when perceiving females and on stereotypically male characteristics (agentic traits) when perceiving male to a greater extent than in negative mood.

### Research Overview

Along with feelings-as-information theory it was predicted that positive mood, elicited either by the perceived target (Study 1 and 2) or by the independent source (Study 3), would lead to relying on accessible content in perceiving strangers (Study 1 and 2), as well as people that we know (Study 3). Specifically, it was predicted that in case of men perception, positive mood would lead to focusing on agency-related qualities (relevant to male stereotype; Study 1) more than negative mood, whereas in case of women perception, positive mood would enhance focusing on communion-related qualities (relevant to female stereotype; Study 1 and 2). In case of perceiving people that we know, positive feelings should lead to rely on communal content (Study 3). In all above conditions, this effects should be greater in positive than negative mood.

### Study 1

According to feelings-as-information theory (Schwarz, 2012) proprioceptive feedback from body movements, like facialex pressions (e.g., Strack, Martin, & Stepper, 1988), influence judgment and processing style in ways that parallelaffective influences. Evidence is accumulating that peopl mimic others' emotional facial expressions (Bush, Barr, McHugo, & Lanzetta, 1989; Dimberg, 1982) and that these facial expressions directly produce the corresponding feelings (Duclos et al., 1989; Strack, Martin, & Stepper, 1988; Stepper & Strack, 1993). Thus, mimicking the facial expression of the perceived person can change our feelings which consequently influence our processing style. Following that logic, in the Study 1, participants were asked to mimic the facial expression of a woman or a man in order to induce positive or negative mood. It was predicted that elicited positive feelings would lead to more stereotypical perceptions comparing to negative feelings conditions.

### Method

**Participants.** Undergraduate students ( $n = 48^{1,2}$ ) from University of Gdańsk voluntarily participated in a study on person perception. Participants were run individually and were randomly assigned to the positive or negative mood condition.

**Mood control and manipulation.** Before mood manipulation, participants were asked to indicate on 5-point scales to what extent they agreed with the following statements: "I am in the bad mood", "I feel relaxed and calm", "I feel depressed" and "My mood is fine". This items constitute the General Mood Scale (Wojciszke & Baryła, 2005) which allows to control for mood before and after manipulation. Afterwards, participants were informed that some studies suggest that mimicking a facial expression of another person facilitates making a judgment about that person, even if it is a total stranger to us. Following that, they were provided with a picture of a woman or a man who was expressing either a happy or a sad face (Ekman & Friesen, 2003). In order to induce positive or negative mood, participants were asked to mimic the facial expression demonstrated by the woman in a picture and hold it on their face for 30 seconds. All participants who expressed difficulties with holding the expression did not follow the experimental procedure and were thanked at that moment.

This manipulation can be perceived as troublesome, as at first glance it confounds the effects of elicited feelings with the mere perception of a smile or sadness. However, according to recent developments of grounded cognition approach, there is no such phenomena like the mere perception – perception and action are part and parcel of the same process (Barrett, 2011). Mirror neurons fire both when an actor performs an action and when the actor simply observes another individual performing the same action (Rizzolatti, Fadiga, Gallese, & Fogassi, 1996). That is why people mimic each other spontaneously when being in interaction (Chartrand & Bargh, 1999). In the presented studies, the goal of providing participants with the instruction to mimic the facial expression of a target person was to strengthen the effect of automatic mimicking (look also Parzuchowski & Szymkow-Sudziarska, 2008). Taking this view into account, the confound of elicited mood and the target's facial expression is not so obvious anymore. The problem would appear, if the integral feelings were confounded with the positive or negative target attributes that elicited them, making it impossible to determine whether observed differences are driven by experiential information or by declarative information in the form of different target attributes (Schwarz, 2012). But this was not the case in presented studies. What elicited participants' feelings here was not the set of target's attributes but the process of mirroring the facial expression of the target.

<sup>1</sup> In Study 1 and Study 2 participants' sex and age were not recorded, but in all studies the population of students was tested and the vast majority constituted of female participants.

<sup>2</sup> The 48 participants described here are those who fulfilled the requirement of holding the facial expression accordingly to their experimental condition so all of them were taken into analysis.



I find this manipulation worthwhile as when a feeling is elicited by the object of judgment, it provides valid information about the person's own response to the target (Schwarz, 2012) and attending to this information is highly adaptive, as a large body of research indicates (Barrett & Salovey, 2002). What's also important to mention, from the perspective of feelings-as-information theory, the use of integral and incidental feelings as a source of information reflects the same basic mechanism (Schwarz, 2012).

**Dependent measures.** After the mimicking session, an experimenter took pictures away from participants and provided them with questionnaires. At first, to control for participants mood, students were asked to indicate on 5-point scales to what extent they agreed with the following statements: "I feel great", "I'm in the bad mood", "I feel grey and hopeless" and "I'm in a good mood" (Wojciszke & Baryła, 2005). Next, they were asked to indicate to what extent each of 7 presented traits describes the perceived person on 6-point scale from 1 (*not at all*) to 6 (*very much*). The traits consisted of 3 agentic traits (*intelligent, capable, hardworking*), 3 communal traits (*sociable, self-centered, focusing on others*) and the attractiveness of the person. At the end, participants were thanked for their participation in the study and debriefed.

## Results

**Manipulation check.** Negatively correlated items of mood scale were recoded in a way that the higher value indicated the more positive mood expressed by participants. Then, two mood indexes were computed by averaging the ratings before mood manipulation (Cronbach's  $\alpha = .74$ ) and after the manipulation (Cronbach's  $\alpha = .84$ ). Next, a 2 (facial expression: smile vs. sadness) x 2 (target sex: female vs. male) x 2 (time of mood measurement: before vs. after manipulation) repeated measures ANOVA on the last factor was performed. The only significant effect was the interaction of facial expression and the time of mood measurement,  $F(1, 44) = 6.60, p < .05, \eta^2p = .13$ . All participants were in the same mood before manipulation ( $M_{smile} = 3.92, SD = .81$  vs.  $M_{sadness} = 3.88, SD = .84; t < 1$ ). Mimicking smiling expressions enhanced participants mood ( $M_{before} = 3.92, SD = .81$  vs.  $M_{after} = 4.29, SD = .68; t(23) = 2.40, p < .05$ ) while mimicking sad expressions worsened mood insignificantly ( $M_{before} = 3.88, SD = .84$  vs.  $M_{after} = 3.63, SD = 1.02; t(23) = 1.34, p = .097$ , one-tailed). As a consequence, participants mimicking happy faces felt better ( $M = 4.29, SD = .68$ ) than participants mimicking sad expressions ( $M = 3.64, SD = 1.02; t(46) = 2.61, p < .05$ ). Thus, the mood manipulation was successful in a sense that there was a difference in mood estimates between experimental groups. However, it cannot be claimed that participants in the negative mood condition actually felt badly. They just felt less positively than participants mimicking happy faces.

**Overall evaluation.** The index of overall evaluation of a person presented in the picture was computed by averaging ratings for all traits but one which significantly lowered the reliability of the scale (self-centered). The final reliability index was satisfactory (Cronbach's  $\alpha = .80$ ). Next,

the overall evaluation ratings were subjected to a 2 (facial expression: smile vs. sadness) x 2 (target sex: female vs. male) ANOVA. The analysis yielded only one significant main effect of facial expression,  $F(1, 44) = 34.28, p < .001, \eta^2p = .44$ . Smiling woman or smiling man were evaluated more positively ( $M = 4.16, SD = 0.50$ ) than those who expressed sadness ( $M = 3.21, SD = 0.62$ ).

**Trait ascription.** To the extent that individuals in happy moods are more likely than those in sad moods to rely on accessible cognitions, including expectations and stereotypes (Clore, Gasper & Garvin, 2001), it was predicted that in comparison to negative mood, positive mood would lead participants to perceive a woman in terms of communion and perceive a man in terms of agency, as perceivers generally assume that men are oriented toward agentic goals and women toward communal goals (e.g., Bem, 1974; Williams & Best, 1990). Thus, in order to check for these effects, the analysis was conducted separately for agentic and communal qualities ascribed to perceived woman and man. Because of the low reliability of agency (Cronbach's  $\alpha = .68$ ) and communion scales (Cronbach's  $\alpha = .50$ ) the analysis was run only for intelligence (as a clear example of agency dimension) and for focusing on others (as a clear example of communion dimension; Wojciszke, 2010).

First, the intelligence ratings were subjected to a 2 (facial expression mimicked: happy vs. sad) x 2 (target sex: female vs. male) ANOVA. The analysis yielded a main effect of facial expression mimicked,  $F(1, 44) = 5.78, p < .05, \eta^2p = .12$ , indicating that mimicking happy facial expressions led to ascribing more intelligence ( $M = 4.08, SD = 0.72$ ) than mimicking sad expressions ( $M = 3.58, SD = 0.78$ ), independently of the target's sex. More importantly, this main effect was qualified by the expected interaction of facial expression mimicked and target sex,  $F(1, 44) = 4.02, p = .051, \eta^2p = .08$ . As can be seen in Figure 1, participants mimicking happy face ascribed more intelligence to a man ( $M = 4.42, SD = 0.79$ ) comparing to those mimicking a sad face ( $M = 3.50, SD = 0.90; t(22) = 2.64, p < .05$ ), and that was not the case for women perceptions. Both, mimicking a smiling woman ( $M = 3.75, SD = 0.45$ ) or a sad woman ( $M = 3.67, SD = 0.65$ ), led to the same ratings of intelligence ( $t < 1$ ). The prediction was confirmed: participants in positive mood were more likely than those mimicking sad facial expressions to rely on accessible knowledge about men. (See Figure 1 - page 438)

The same analysis was conducted for the ratings of focusing on others and it yielded the only one significant main effect of facial expression mimicked,  $F(1, 44) = 4.27, p < .05, \eta^2p = .09$ . Similarly as in case of intelligence, mimicking happy facial expressions led to perceiving a person as more focused on others ( $M = 3.67, SD = 1.01$ ) than mimicking sad expressions ( $M = 3.13, SD = 0.80$ ), independently of the target's sex. The expected interaction was not significant ( $F < 1$ ), so hypothesis concerning perception of woman was not confirmed.

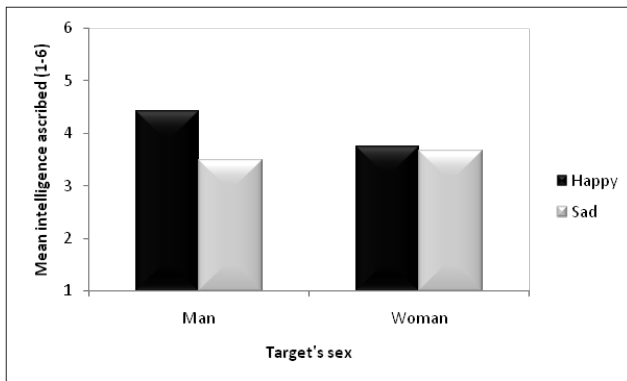


Figure 1. Mean intelligence ascribed to a woman or a man as a function of mimicked facial expression (Study 1).

## Discussion

Study 1 showed that the manipulation of mood by mimicking the happy or sad facial expression of a target person was successful, as mimicking a smiling person led to the more positive mood than mimicking a person expressing sadness. The results of trait ascriptions are in line with predictions only for perception of men. As expected, participants in positive mood tend to rely on stereotyped expectations, perceiving men as more intelligent than participants in negative mood condition. However, participants in positive mood did not perceive women to be more focused on others comparing to those in less positive mood, so the predictions were not supported in case of women perception. This may be due to the poor traits collection, as both scales for agency and communion were not sufficiently reliable. Thus, the second study is dedicated for woman perception only and the traits reflecting agency and communion dimensions were chosen with much more scrutiny and consideration.

## Study 2

Study 2 tested the same predictions as Study 1 with the use of the same mood manipulation. Depended measures were also conceptually similar as they tested the importance of agentic and communal traits. For reasons discussed earlier, it was expected that positive mood would lead participants to give more importance to communal than agentic traits in the perception of woman in comparison to negative mood condition.

## Method

**Participants.** Undergraduate students ( $n = 60^3$ ) from University of Gdańsk voluntarily participated in a study on person perception. Participants were run individually and were randomly assigned to the positive or negative mood condition.

**Mood manipulation.** As in the Study 1, participants

were informed that some studies suggest that mimicking a facial expression of another person facilitates making a judgment about that person, even if it is a total stranger to us. Following that, they were provided with a picture of a woman who was expressing either a happy or a sad face (Ekman & Friesen, 2003). In order to induce positive or negative mood, participants were asked to mimic the facial expression demonstrated by the woman in a picture and hold it on their face for 30 seconds. All participants who expressed difficulties with mimicking or holding the facial expression are not included in the following analysis.

**Dependent measures.** After the mimicking session, an experimenter took pictures away from participants and provided them with questionnaires. At first, to check for participants mood, students were asked to indicate on 5-point scales to what extent they agreed with the following statements: “I feel great”, “I’m in the bad mood”, “I feel grey and hopeless” and “I’m in a good mood”. This items constitute the General Mood Scale (Wojciszke & Baryła, 2005). Next, they answered the following questions about the women in the picture: “What is your overall impression of the presented person?” (1 = *very negative*, 6 = *very positive*), “Do you find the person likable?” (1 = *not at all likable*, 6 = *very likable*), “What is the mood of the presented person?” (1 = *very bad*, 6 = *very good*). Finally, the focusing on agentic and communal qualities was assessed in two ways. First, participants were to guess what kind of trainer in everyday life is the woman presented in the picture. They were provided with two options to choose from – *Training of fast and efficient decision making* (agentic option) and *Training of maintaining satisfactory social relations* (communal option). It was predicted that in the positive mood condition participants would be more likely to pick the default option in perceiving woman (that is communal training) than in the negative mood condition. The second measure consisted of five agentic traits (e.g., intelligent, ambitious) and five communal ones (e.g., honest, loyal) presented to participants. All traits have been confirmed to be highly agentic and highly communal, respectively (Abele & Wojciszke, 2007). The task was to indicate to what extent should the woman in the picture develop each of presented traits on 7-point scales ranging from -3 (*not at all*) to 3 (*definitely yes*). Positive mood should lead to the higher importance of communal traits comparing to negative mood condition.

## Results

**Manipulation check.** Negatively correlated items of mood scale were recoded in a way that the higher value indicated the more positive mood expressed by participants. Then, the mood index was computed by averaging the respective ratings (Cronbach’s  $\alpha = .92$ ). Similarly as in Study 1, participants in the happy face condition declared more positive mood ( $M = 4.06$ ,  $SD = 0.99$ ) than those in the sad face condition ( $M = 3.50$ ,  $SD = 1.27$ ),  $F(1, 58) = 3.60$ ,  $p$

<sup>3</sup> Just as in the Study 1, all participants taken into analysis and described here are those who fulfilled the requirement of holding the facial expression accordingly to their experimental condition.

< .05 (one-tailed),  $\eta^2p = .06$ , indicating that our manipulation worked as intended. However, it must be noticed again, that participants mimicking sad facial expressions did not feel really bad, but relatively less positive than participants mimicking happy faces. Additionally, participants accurately recognized the mood of a woman in the picture,  $F(1, 58) = 308.33, p < .001, \eta^2p = .84$ . Smiling woman was perceived as having more positive mood ( $M = 5.03, SD = 0.61$ ) than sad woman ( $M = 2.07, SD = 0.69$ ). This is with line with previous studies which show that smiles communicate that the expresser feels happiness or joy (Frank & Stennett, 2001).

**Overall evaluation.** The index of overall evaluation of a woman in the picture was computed by averaging ratings for two respective questions (Cronbach's  $\alpha = .80$ ). The smiling woman was evaluated more positively ( $M = 4.18, SD = 0.66$ ) than the sad woman ( $M = 3.08, SD = 0.74$ ),  $F(1, 58) = 36.57, p < .001, \eta^2p = .39$ .

**Training ascription.** We explored the association between participant's induced mood and the type of training that participants were to ascribe. The effects was significant,  $\chi^2(1, N = 60) = 5.93, p < .05, \phi = .31$ , and the odds-ratio analysis showed that participants in positive mood were 4 times more likely to ascribe communal training to the perceived woman than agentic training (OR = 4.00), while in the negative mood condition no differences were found (OR = 1.00). It goes along with predictions, as in the positive mood condition participants perceived the woman in stereotypical manner which effect was eliminated in the negative mood condition.

**Trait importance.** The indexes for the importance of agency dimension (Cronbach's  $\alpha = .85$ ) and for the communion dimension (Cronbach's  $\alpha = .85$ ) were computed, by averaging the respective ratings. Then, a 2 (induced mood: positive vs. negative) x 2 (traits: agentic vs. communal) repeated measures ANOVA on the second factor was performed. A significant interaction of mood and the type of traits was the only significant effect in this analysis,  $F(1, 58) = 13.24, p < .005, \eta^2p = .19$ . As can be seen in Figure 2, participants in positive mood condition declared that the perceived woman should develop both the communal ( $M = .79, SD = 1.31$ ) and agentic qualities to the same extent ( $M = .47, SD = 1.46$ ), with a tendency towards emphasizing communal traits, ( $t(29) = 1.60, p = .06$ , one-tailed). More importantly, in the negative mood condition participants gave less weight to the development of communal qualities ( $M = .25, SD = 1.05$ ) than in the positive mood condition ( $M = .79, SD = 1.31; t(58) = 1.78, p < .05$ , one-tailed) what resulted in the more importance of developing agentic ( $M = .96, SD = 1.12$ ) than communal traits in the negative mood condition ( $t(29) = 3.57, p < .005$ )<sup>4</sup>.

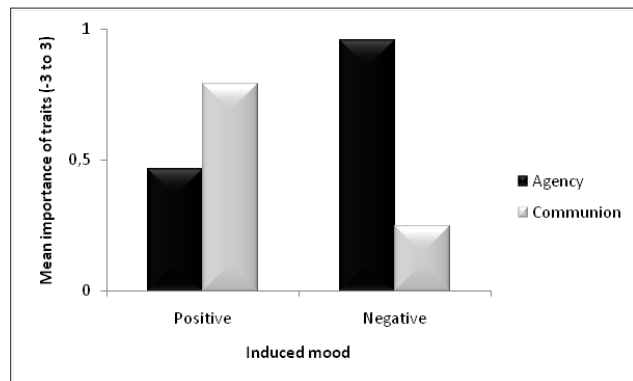


Figure 2. Mean importance of agency or communion as a function of positive or negative mood (Study 2).

## Discussion

Study 2 was designed to test whether positive mood would lead participants to rely on the default option in perception of woman (that is giving more weight to the communal qualities comparing to agentic ones) to a greater extent than negative mood, in accordance to emotion-as-information theory. The findings support the general reasoning. When in positive mood (induced successfully by mimicking the facial expression of perceived woman) participants were more likely to perceive the woman as a trainer of communal rather than agentic qualities which effect disappeared in negative mood condition. Moreover, participants experiencing positive mood emphasized the importance of developing communal traits to a greater extent than participants mimicking sad facial expressions, what together indicates that the relying on stereotyped expectations in woman's perception was stronger in the positive than in the negative mood condition.

## Study 3

The main purpose of Study 3 was to disentangle the effects of mood (that was induced by mimicking the happy or sad facial expressions in both previous studies) from the possible effects of looking at facial expression itself, as one could argue that the obtained results need not to be effects of mood experiencing at all. To disentangle the contributions of the perceiver's feelings from other information about the target, experimental tests of the feelings-as-information hypothesis usually rely on the induction of incidental affect (Schwarz, 2012). Thus, the mood manipulation in Study 3 was changed and did not relate to the perceived target. Moreover, Study 3 aims at testing predictions derived from Hypothesis 3: To the extent that communal qualities are more accessible than agentic traits when thinking about others, positive mood should lead to focusing on communal traits more than negative mood,

<sup>4</sup> It should be noticed that it is plausible that the ascription of an agentic or communal training to a target person influenced trait's importance evaluated in the next task. However, as in the negative mood condition there was the equal number of participants who ascribed communal and agentic training to a perceived woman, it was possible to rule out such reasoning statistically. Neither importance of agentic traits ( $p = .177$ ) nor communal once ( $p = .659$ ) was affected by the training ascription.



in accordance with feelings-as-information approach.

## Method

**Participants.** Undergraduate students ( $n = 40$ ;  $M_{age} = 21.15$ ,  $SD = 1.29$ ) from University of Social Sciences and Humanities in Sopot, voluntarily participated in a study on the influence of memory on person perception. Participants were run in groups but worked individually and were randomly assigned to the positive or negative mood condition.

**Mood manipulation.** To induce mood, participants were asked to write about a happy event (which caused they felt really good and happy) or sad event (which caused they felt really badly and sad). This procedure was validated by Schwarz and Clore (1983) and proved to be an effective means to induce a positive versus negative mood in many studies (e.g. Gasper & Clore, 2002).

**Dependent measures.** After the manipulation phase, participants were asked to answer one following question: “How do you feel right now?”, which served as manipulation check. They gave their answers on 6-point scales ranging from 1 (*definitely bad*) to 6 (*definitely good*). Additionally, all events written by participants were rated by one independent judge for their positivity/negativity on 5-point scales ranging from -5 (*very negative*) to 5 (*very positive*).

In order to assess whether participants focus on communal or agentic qualities in their perceptions of others, they were asked to think of a person they know, but who is not the closest friend nor a family member. Next, they were asked to complete a semi-projective measure called the Twenty Statements Test (McPartland, Cumming, & Garretson, 1961; Hartley, 1970), which was slightly varied for the present purposes. We asked them to finish 20 sentences that started with “This person is \_\_\_” instead of the original “I am \_\_\_”. Participants were also asked to indicate the sex of a person they thought of and for how long they knew the person. After the experiment, two raters rated all qualities given by participants for their positivity/negativity as well as for whether they expressed agency or communion dimensions. The instruction for the agency rating was “Agency denotes that the acting person is agentic ally oriented, that is, he or she is oriented toward doing things in an efficient way or that he or she is not oriented to action and inefficiency (or the opposite)” and for communion ratings “Communion denotes that the acting person orients toward other people, focus on relationships and contacts with others (or the opposite)”. Raters were asked to 1) decide whether each item belongs to agentic qualities category, communal qualities category or none of them, so the number of agentic and communal qualities ascribed could serve as dependent variable<sup>5</sup>, 2) indicate to what extent each item reflects agency or communal dimension on 11-point scales ranging from -5 (high agency) to 0 (neither agency nor communion) to 5 (high communion), so the extent to which the perceived person was described in agentic or communal manner could serve

as another dependent variable. Positivity/negativity of each item was rated also on 11-point scale ranging from -5 (very negative) to 0 (neither positive nor negative) to 5 (very positive). The raters’ responses were averaged because they showed a high levels of agreement (for positivity/negativity ratings:  $r(40) = .98$ ; for agency/communion ratings:  $r(40) = .83$ ).

## Results

**Manipulation check.** Participants describing positive events felt more positively ( $M = 5.06$ ,  $SD = 0.85$ ) than those describing negative events ( $M = 4.06$ ,  $SD = 0.91$ ;  $t(36) = 3.50$ ,  $p < .005$ ). In addition, the rater’s evaluations showed that events that were to express happiness were in fact more positive ( $M = 3.10$ ,  $SD = 1.21$ ) than those reflecting sad experiences ( $M = -3.00$ ,  $SD = 0.97$ ;  $t(38) = 17.57$ ,  $p < .001$ ).

**Traits ascription.** A *t* test for independent samples showed that traits which participants ascribed to a target person were significantly more positive in the positive mood condition ( $M = 2.79$ ,  $SD = 1.53$ ) than in the negative mood condition ( $M = 1.18$ ,  $SD = 2.30$ ;  $t(38) = 2.62$ ,  $p < .05$ ). In the next step, the number of traits ascribed was subjected to a 2 (induced mood: positive vs. negative)  $\times$  3 (traits: agentic vs. communal vs. neutral) repeated measures ANOVA on the second factor. The analysis yielded a main effect of ascribed traits,  $F(2, 76) = 7.05$ ,  $p < .005$ ,  $\eta^2p = .47$ , indicating that participants ascribed more communal traits to a target person ( $M = 6.73$ ,  $SD = 3.08$ ) comparing to both agentic ( $M = 4.98$ ,  $SD = 2.77$ ;  $p < .05$ ) and neutral traits ( $M = 4.38$ ,  $SD = 2.76$ ;  $p < .005$ ). This effect is in line with numerous studies which have found that the communal dimension is more important than the agency dimension in perception of others (Wojciszke & Abele, 2008; Wojciszke, Bazinska, & Jaworski, 1998; Ybarra, Chan, & Park, 2001; Abele & Bruckmüller, 2011). The expected interaction of induced mood and ascribed traits did not reach significance,  $F(2, 76) = 2.16$ ,  $p = .123$ ,  $\eta^2p = .06$ . However, we tested the simple effect of ascribing communal traits in the positive vs. negative mood, as this was the hypothesized effect in question. As can be seen in Figure 3, in accordance with expectations, participants in positive mood ascribed more communal traits to a target person ( $M = 7.60$ ,  $SD = 3.25$ ) than those in negative mood condition ( $M = 5.85$ ,  $SD = 2.70$ ;  $t(38) = 1.85$ ,  $p < .05$ , one-tailed). The number of agentic traits ascribed to a target person did not differ between the conditions ( $M_{positive\ mood} = 5.15$ ,  $SD_{positive\ mood} = 2.85$  vs.  $M_{negative\ mood} = 4.80$ ,  $SD_{negative\ mood} = 2.75$ ;  $t < 1$ ). It is worthy to mention that neither the sex of a target person nor the length of the relation with participant influenced the sort and the number of traits ascribed.

The analysis for the extent to which participants’ descriptions expressed agency or communion showed no significant effects,  $t < 1$ . (See Figure 3 - page 441)

<sup>5</sup> In case of raters’ disagreement, the given characteristic was not taken into account in further analysis



Figure 3. Mean number of agentic and communal traits ascribed to a target person as a function of positive or negative mood (Study 3).

## Discussion

Study 3 was designed to replicate the previous findings with the main goal of disentangling the effects of mood from the possible effects of looking at facial expression of the evaluated person. The mood manipulation proved to be effective and results of the study showed the expected tendency. Participants expressed the default strategy in perceiving others, ascribing more communal traits in the positive mood in comparison to negative mood condition.

### General discussion

The feelings-as-information theory posits that people use their feelings as any other kind of information. Subjective feelings (moods, bodily sensations, metacognitive experiences) inform us about the nature of our current situation and tune our thought processes to meet situational requirements (Schwarz, 2012). Positive feelings signal that the situation is benign what results in adapting default strategies in perception and action, such as relying on accessible knowledge structures relevant to the current situation (e.g., use of stereotypes). On the contrary, negative feelings signal that something goes wrong in the situation what leads to more systematic processing and to abandoning the reliance on usual routines (Schwarz, 2012). The studies presented here aimed at showing that positive feelings would enhance the default strategies in perception of others within two fundamental dimensions – agency and communion. It was predicted that in case of perceiving strangers, positive mood would lead to focusing on stereotypically relevant content, namely on communal qualities for women and agentic qualities for men. This prediction was tested and confirmed in Study 1 and 2. Feelings elicited by adapting the happy or sad facial expression led to perceiving men as more intelligent comparing to negative feelings condition. The relevant effect for women perception was not obtained in Study 1, but eliminating the probable cause by providing the better selection of communal traits in Study 2 gave the expected effect: positive mood led participants to give more weight to communal rather than agentic qualities when perceiving woman.

In the Study 3, the mood manipulation was not related to the perceived target, as the induction of incidental affect was performed (Gasper & Clore, 2002). Participants were asked to recall an event which made them feel either happy or sad, and afterwards they described the known (but not very close) person. It is important that the person was not the close one, as people tend to evaluate close others just as they evaluate themselves what results in the greater importance of agentic than communal traits for a close friends (Wojciszke & Abele, 2008). The results of Study 3 showed the expected pattern of results: participants in positive mood ascribed more communal qualities to recalled peer comparing to participants in negative mood. This effect was independent of the sex of recalled person which confirms the predictions – if we already know the person, our judgments are influenced more by the individuating information about that person than by category information, like the person's sex (Fiske & Neuberg, 1990). Overall, the effects turned out not to be especially strong which is presumably due to the fact, that negative mood manipulations did not actually decrease participant's mood to really negative point. Thus, it is possible that the effects were merely driven by the happiness manipulation which facilitated relying on stereotypes. Future studies should involve the control condition in order to examine the direction of presented effects.

It is important to mention that the increased reliance on general knowledge structures can also result from individual's arousal levels and thus the valence of the affective state may not be the only determinant of the use of stereotypes (Bless, 2001). In fact, the impact of the valence may be overridden by the arousal level associated with particular mood states. As a consequence, sad people tend to be less influenced and angry participants tend to be more influenced by an activated stereotype compared with people in neutral moods (Bodenhausen, Sheppard & Kramer, 1994). Other studies indicate, that also positive states that differ in their motivational intensity may have different effects on cognitive processing (Harmon-Jones & Gable, 2008; Harmon-Jones, Price & Gable, 2012). Motivationally intense affective states narrow cognitive scope to make the goal-directed behavior more effective. On the other hand, affective states low in motivational intensity broaden cognitive processes to open the organism to new opportunities. Taking these into consideration, one must be cautious to generalize the presented studies to the effects of just positive and negative mood. It was merely happiness and sadness that was manipulated, both definitely rather low in arousal and motivational intensity.

To conclude, the presented studies show the very initial evidence that experiencing positive or negative feelings influence the perception of communal and agentic qualities in perception of others in a way which confirms the feeling-as-information theory. Future studies should examine the role of non-affective feelings, like the metacognitive experience and bodily sensations which should lead to the same effects as mood manipulations. For example, pushing upwards on a table from underneath (an action typically associated with approach) should lead to applying default



strategies in person perception, while pushing downward on the tabletop (an action typically associated with avoidance) should hamper the expected effects (e.g., Cacioppo, Priester, & Bernstone, 1993). An interesting extension of presented studies would also be to investigate the perception of self. As focusing on communal qualities can be considered as the default strategy in perception of others, when it comes to self-perception the opposite seems to be true. Agentic qualities are more desirable from the perspective of self (Abele & Wojciszke, 2007) and consequently they acquire more prominence than communal traits when we think about ourselves (Wojciszke & Abele, 2008; Wojciszke, Baryła, Parzuchowski, Szymkow, & Abele, 2011). Thus, it could be predicted that in case of self-perception positive feelings should strengthen the prominence of agentic traits in comparison to negative feelings. The same pattern of results could be predicted for the perception of close others, as the smaller the distance between the self and the other, the more importance is given to agentic qualities (Wojciszke & Abele, 2008).

Agency and communion, as two fundamental dimensions of social perception, gained a lot of attention throughout the last two decades. Huge amount of data have been accumulated which successfully outline the conditions in which the one or the other dimension plays an important role. And since everyone seem to agree that affect, emotions and all that we feel constitute very substantial influences of how we think and behave in social situations and understanding the interplay between affect and cognition lies at the heart of many domains of psychology (Forgas, 2001), the role of feelings in perception of agency and communion cannot be overlooked.

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