

Ingroup/Outgroup Bias and Emotional Perception

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Abstract. With the globalization of the world, it has become a main tendency to establish cooperative relations among countries. However, in the course of historical development, countries have formed their own unique culture and established profound national consciousness and identity. These gaps between countries cause prejudice and stereotypes which hinder cooperation. To get to the root of the problem, it is crucial to find out what factors would influence the formation of group bias. People always associate group identity with intergroup bias, but few have thought about the relationship between group bias and emotional perception. However, as a prerequisite for understanding others' behavior, emotional perception will greatly affect people's behavioral responses to others. Recent studies give more concern about the relationship between group bias and emotional perception, and they confirmed that they do influence each other. This review discussed how group bias and emotional perception affect each other and also factors that work in this relationship. It was found that people tend to judge more positively towards ingroup members' emotions. In addition, competition plays an important role in the generation of emotional perception bias. With these conclusions, it might be easier to reduce group bias and promote cooperations in society.

Keywords: Group bias, emotional perception, competition.

1. Introduction

Emotions are recognized as increasingly important in aspects of intergroup bias and prejudice. Previous studies showed that emotional perception in groups is tightly associated with intergroup behaviors and biases. Emotional perception in psychology refers to the ability to accurately recognize, understand, and interpret the emotions of oneself and others. Group bias, also known as ingroup bias, refers to the tendency for individuals to behave more positively towards ingroup members compared to outgroup members. As preconditions of understanding and reaction, emotional perception may strongly affect people's behaviors when communicating with others. With the globalization of the world, communications between countries are becoming increasingly important. However, due to historical reasons, bias has generated among countries which may undermine cooperations. In order to build closer international cooperation and achieve multilateral win-win results, it is crucial to make clear the relationship between group bias and intergroup emotional perception.

Research focused on how intergroup threats may influence the generation of negative outgroup attitudes. In the literature concerned with intergroup threats, researchers described the evolution of compete theories, from realistic group conflict theory and symbolic threat theory to more complicated ones like integrated threat theory [1]. Plus, many studies are trying to find out whether there is a relationship between intergroup threats and outgroup attitudes. Qualitative reviews revealed that they do have relations [1]. Studies were conducted to find out how each type of threat could uniquely influence outgroup attitudes and among variety of factors, researchers found that five types of threat, that are realistic threat, symbolic threat, intergroup anxiety, negative stereo types, and group esteem threat, all displayed significant relationships with outgroup attitudes.

In addition to the studies concentrated on the relationship of intergroup threats and group bias, researchers also focused on two factors that may impact intergroup threats, that are negative stereotypes and ingroup identification [1]. It was found that members with higher group identification experience higher levels of intergroup threats compared to low group identifiers. Apart from group identity, negative stereotypes also have a positive relationship with threat perception. At the same time, there also exists a direct and unique relationship between negative stereotypes and outgroup attitudes.

The majority of studies focused on how negative outgroup attitudes generate, but there were few studies trying to find out how people can reduce intergroup threats [1]. Some scholars suggested that culture diversity may help to reduce symbolic and realistic threats. As the relation between intergroup threats and group bias is studied more clearly, it might be a trend for researchers to study methods that can eliminate intergroup threats and negative outgroup attitudes. However, there are also limitations in the studies of this area. For instance, there have been limited studies that examined whether outgroup attitudes may have an impact on intergroup threats. Additionally, although studies have found that threats lead to negative outgroup attitudes, they did not make it clear what specific behavioral outcomes different threats may lead to.

Emotional perception and categorization are crucial for humans to act for the stimuli in the environment. There are many studies about emotional stimulus that focused on the perception and categorization. Studies are trying to illustrate the relationship between emotion and cognition from the following several aspects. Firstly, they focused on how people recognize stimulus as emotional and how emotional categorizations are formed [2]. Furthermore, studies showed that emotional stimulus is detected more rapidly and is more easily to be consciously noticed in perception compared to general stimulus [2]. Therefore, scholars attempt to find out how processing of emotional stimulus, which are directly relevant to well-being and survival of humans, prioritized in order to adapt for rapid preparation of proper response of behaviors.

In addition to how emotional categorizations are determined, research also shed light on the factors that have influence on the emotional categorization [2]. Most scholars assumed that the individuals' evaluations of emotional quality contribute to the prioritization of stimulus. It is found that humans are more sensitive to physical expressions such as facial, vocal and bodily expressions. This may be due to the reason that humans have a higher accuracy of classification when facing these physical expressions which help them to rapidly perceive their interaction partners' emotion statue so they can response appropriately [2]. Besides, emotion categorizations can be flexibly and continuously adjusted but not determined universally or biologically [2]. They could be affected by their surroundings and the individuals' personal experience and personalities. Furthermore, contextual top-down information also plays an extremely important role in emotional categorization.

In the first review, it comes to the conclusion that intergroup threats do have influence on negative outgroup attitudes, and negative stereotypes and group identification play important roles in it. Studies in the second review clarified how stimulus are categorized as emotional and how emotional categorization is formed. There are quantities of research in each area but hardly exist studies that concentrate on the relationship of emotional perception and categorization and the generation of intergroup threat that may cause group biases. However, as cooperation is becoming increasingly important nowadays, in order to form better relations among countries, it is crucial to reduce negative outgroup attitudes. Only by figuring out the relations between emotional perception and group identification researchers could solve the problem fundamentally. And the present paper will explain this topic from factors contributed to ingroup and outgroup difference in perception and the relations between group bias and emotional perception.

2. Factors Contributed to Ingroup/Outgroup Differences in Perception

2.1. Different Emotional Perception to Outgroup Members

People tend to show different attitudes towards outgroup members. And this bias in attitudes widely exists among countries, nations and even small groups in a college course. Apart from attitudes and behaviors, studies also found that there are differences in emotional perception towards ingroup and outgroup members. People perceive ingroup and outgroup members' emotions differently in intensity. In the study by Kommattam et al., the intensity bias of emotion perception towards ingroup and outgroup members was evaluated by an online experiment. It was found in the previous research that people are more likely to empathize with ingroup members and this led to the intensity perception bias. Also compared to ingroup members, outgroup members were judged as less human, so they are

perceived as less intense [3]. Therefore, it was supposed that individuals may have a lower intensity perception towards facial expressions of outgroup members compared to ingroup members.

Experiment was committed online to find the bias in emotion recognition in different ethics. Participants were asked to do some questionnaires associated with ethical problems and then they were given pictures of ingroup and outgroup emotional faces. They need to assess the emotion on four labels (e.g., happy, content, proud, superior) ranging from 0-100 points. The result showed that individuals from European perceived outgroup members' emotion less intensively [3]. For the other factors that influenced intensity bias there could be two important things [3]. Firstly, the intensity biases were reduced when there is more information about emotional context. Secondly, so-called secondary emotions (e.g., pride, embarrassment) aroused stronger intensity bias.

Group identity would influence how people judge ambiguous faces. Basyouni et al. conducted a study to investigate the influence of political group identity when making emotional expression judgment by using ambiguous facial expressions (e.g., surprise) [4]. Some suggested that explanation of ambiguous facial expressions may influenced by pre-existing beliefs and attitudes, so it became a great tool for detecting valence bias (i.e., the tendency to judge ambiguous factors negatively) [4]. The study investigated 60 Republicans and 60 Democrats. Participants are given several pictures of facial expressions representing surprise labeled with political identity and they were asked to judge the ambiguous facial expressions with positive or negative emotions [4]. It shows that people tend to judge ambiguous facial expressions like surprise of outgroup members more negatively, while judgements for surprise faces did not differ from another for ingroup or uncategorized members [4]. Furthermore, it is found that Republicans are more likely to have negative biases when judging surprise than Democrats across all group conditions.

Group identity also affects facial mimicry and how people judge others' expressions. In the study conducted by Hess et al., the influence of facial mimicry of others' expressions and the judgement of genuineness towards facial expressions only labelled by ingroup or outgroup members was investigated with participants of football fans [5]. In the first study, the experiment contributes to finding out how group identities affect facial mimicry of emotion expressions. Participants identified themselves as German fans were given reactions of people presented as Germany or Dutch fans when their team were experiencing win or loss [5]. They were asked to make a judgement of the fans' emotions and also researchers recorded participants' facial mimicry during the period. In order to investigate the role of tears in the circumstance, their presence was controlled by researchers. The result indicates that there was a tendency to imitate low-intensity ingroup expressions while the imitation would limit to high-intensity pleasant expressions. However, it is found that rather than arise empathy, tears showing weakness were more likely to provoke ridicule. In their following study, it focused on assessing the genuineness of emotional expressions and the study was also conducted among football fans. It showed that compared to outgroup members, participants assess ingroup expressions happy and fear as more genuine [5]. At the same time, participants perceive sadness of outgroup members as more genuine. To conclusion, the study suggested that both membership and cooperative shaped how facial expressions were mimicked and interpreted [5].

There are also differences in holistic processing of ingroup or outgroup faces. Wei Chen et al. evaluated how implicit social bias and experience for the outgroup members, and holistic processing ability (i.e., the ability to holistically process all the facial features) for ingroup faces might predict holistic processing of other-group faces in both the other-race and the other-age groups [6]. The researchers conducted two experiments in different groups and in each experiment, participants were asked to finish three tests, a composite task about ingroup and outgroup faces, an implicit association test, and questionnaires about their experience with ingroup and outgroup members [6].

In the first experiment, Caucasian participants are given both faces of their own race and Eastern Asian facies. It was found that factors like holistic processing of ingroup faces and outgroup implicit social bias influenced a lot when holistically processing other-race faces. Positive biases towards other-race members concerned with positive emotions would lead to an increase of holistic processing [6]. While in the second experiment, ungraduated student participants are given faces with the same

age and faces of babies. It was found that only participants with a strong ability to process ingroup faces holistically and a low level of experience for outgroup members were more likely to be influenced by implicit social bias. All these findings show that people naturally differently perceive emotions of outgroup members compared to ingroup members and this bias is always negative. This negative bias of emotional perception towards outgroup members may to some extent intensify the competition, reinforcing the stereotypes and worsening the imbalance among groups.

2.2. The Role of Competition

Researchers confirmed that people tend to perceive emotions of outgroup members differently, but they did not make it clear what exactly led to this phenomenon. Some recent studies show that it may have to do with competition. The competitive relationship between groups may enhance the difference of outgroup emotional perceptions. In the study by Lazerus et al., three experiments were designed to investigate how group identity influences the judgement of emotional expressions towards ingroup or outgroup members [7]. In the three experiments, participants were randomly divided into two groups and were told to compete against the other group. For the first experiment, participants were asked to evaluate the valence and arousal of targets' emotional expressions on a circumplex affect grid (i.e., vertical dimension for degree of arousal and horizontal dimension from left to right for unpleasant and pleasant). It was found that positive bias was more likely to exist when judging ingroup members compared to outgroup members. In the latter two experiments, the valence biases occurred when judging expressions were measured by a computer mouse-tracking paradigm [7]. And the third experiment also excluded the effect of gaze direction when judging expressions. The latter two research complete the conclusion showing that people judged the expression of ingroup members as more positive both in implicit and explicit levels [7]. This study verified the existence of positive bias in emotional perception towards ingroup members by manipulating competitive relations between groups. The result indicates that competition is one of the factors that may cause emotional perception bias between groups.

Researchers also examined how people's thoughts and emotions towards ingroup or outgroup members changed with time under the influence of environment and self-regulation. The study conducted by Smith et al. included two experiments to investigate the dynamics of participants' emotions towards ingroup or outgroup members when it came to the past, the present and to the future [8]. Participants were required to identify themselves at first, then they were asked to complete a questionnaire or self-report to assess their group-based emotions in the past, at present and ideal emotion level in the future. Consistently, participants regard more positive and less negative emotions towards ingroup members as an ideal situation [8]. Besides, studies also found that people tend to perceive their past more positively than present and future. Additionally, participants expected to feel more positive and less negative about outgroup members compared to the present. This difference of emotional perception towards outgroup members in different times may also be concerned with competitions. The lower negative and more positive attitudes to other groups in the past and future compared to the present may be due to the factor of competition. People cannot perceive that much pressure and threat when they recall the past or look forward to the future. The competition within sight makes them more anxious and therefore reinforces their prejudice towards outgroup members.

3. The Relationship between Emotional Perception and Group Bias

Emotions are always tightly associated with prejudice. It is not hard to notice the relationship between emotional perception and group bias. Studies were conducted to find out what exactly the relationship is. Previous psychologists presented inhumanization theory (i.e., outgroup members were dehumanized through emotion deprivation) to explain the bias in emotion attribution in society [9]. However, recent studies argued that there was a big difference between inhumanization and intergroup preference, for people ascribe both positive and negative human emotions more fiercely to the ingroup compared to the outgroup [9]. In the study conducted by Seger et al., three experiments

were committed to judge the theory. In the first experiment, participants were asked to assess emotion words on three scales, after that, they had to answer several questions. In the second and third one, researchers detected whether ingroup preference and stereotype could be the reason for that appears to be inhumanization [9]. It came to a general conclusion that outgroup members are reckoned to experience prosocial emotions to a less extent compared to ingroup members, while to a greater extent when experiencing antisocial human emotions [9]. The finding present factors that influenced group bias, like ingroup favoritism and outgroup derogation, also the importance of group stereotypes and social contexts were emphasized.

The theory in the previous study explained the bias in emotion attribution between groups. It is found that the bias in emotional perception may to some extent cause group prejudice. Additionally, some studies focused on emotions that can reduce group bias. In the study by Seger et.al., some particular emotions which could reduce group prejudice were assessed in two studies [10]. In study 1, researchers examined participants from different countries and with different ethics, using six positive or negative emotions as mediators of group prejudice. The result demonstrated that the increase of emotions connected with warmth and status like admiration and the decrease of emotions concerned with threaten contribute to the reduction of group prejudice. In study 2, researchers conducted a same experiment within gay men groups. In addition to the conclusion mentioned before researchers also found threat-based emotions such as disgust that may enhance group bias [10]. In both studies, participants report contact towards ethnic out-groups so methods to reduce group prejudice could be found. With the findings, people could carry out strategies to eliminate group bias.

4. Conclusion

This paper had a discussion about the relationship between intergroup bias and emotional perception. It was found that whether in natural groups like nations or groups of people with different ages, or in groups that were manipulated to compete with each other, there always exist biases in outgroup emotional perceptions. The manipulated experiment and the research examined the dynamic emotional perception also showed that competitiveness could be a factor that led to the difference in emotional perception of outgroup people. After figuring out the relationship between group bias and emotional perception, researchers also pay attention to how to reduce the bias. And they find that emotions concerned with warmth and reputation could to some extent reduce group bias. With this conclusion, it might be easier to reduce bias and accelerate communications and cooperations between groups.

Although the relationship between emotional perception and group bias has been generally figured out, there are still some limitations. Firstly, the present paper only talks about competitiveness as one of the factors that may contribute to outgroup emotional perception bias. However, there could be many other factors like group beliefs, the degree of solidarity of the group, group members' group identity and so on. In addition, the studies only discussed the relationship in common circumstances but ignored how this relationship could be in special periods, e.g., the COVID-19 pandemic. This review can provide some insights to the design of programs for facilitating efficient cooperations across diverse groups.

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