Emotion and Intergroup

David Matsumoto and Hyisung C. Hwang

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intergroup emotions, hostility, anger, contempt, disgust
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13. **SUBJECT TERMS.** Key words or phrases identifying major concepts in the report.

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15 June 2015

Dr. Benjamin Knott
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Reference: AFOSR FA9550-10-1-0544

Dear Dr. Knott;

In accordance with AFOSR Award No. FA9550-10-1-0544 from AFOSR to San Francisco State University (SFSU), and the Contract Data Requirements List (CDRL) of the referenced contract, SFSU is pleased to submit the Final Report for the project. If you have any questions concerning the contents of this report, please contact me at (510) 704-1883.

Respectfully,

David Matsumoto, Ph.D.
Professor of Psychology
Principal Investigator

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**Project Overview**

The emotions that people have about themselves, their ingroups, and their outgroups is a crucial component of any group. Group emotions are incredibly important in the creation and maintenance of group identity, solidarity, and overall functioning. Although group emotions have become an important area of study in the past decade, the field still lacks basic information concerning the role of specific emotions in groups. The overarching goal of this five-year project was to examine the role of emotions, and specifically anger, contempt, and disgust, in facilitating the build up to aggression and violence. (Year 1 of this project was fulfilled under a separate contract number.) This project filled this void in our knowledge by testing a theory of the role of specific emotions in the motivation of groups that transform angry or fearful groups into organizations of violence and hostility. We focused on the role of anger, contempt, and disgust (the ANCODI hypothesis) in this transformation, and in the escalation toward violence.

Years 1 (separate contract number) and 2 (Year 1 of the current contract) of this project involved the analysis of historical archival records to test the ANCODI hypothesis of aggression. These studies demonstrated the ANCODI emotions were associated with political aggression in groups; moreover the findings transcended language, group type, and time period. Years 3-5 (Years 1-3 this contract) involved a series of laboratory studies that demonstrated that ANCODI emotions caused members of political groups to harbor hostile cognitions and emotions, and to engage in aggressive behaviors and decision making. Collectively the studies supported the ANCODI hypothesis of political aggression, have made strong contributions to the scientific literature, and have substantial implications for defense and national security.
Summary of Specific Findings across the Entire Grant Period

Year 1

In the first year of this project we tested the ideas outlined in the Project Overview above in a study examining the role of emotion in leading to and justifying hostile acts in ideologically-based groups. We obtained historical archives of world leaders and leaders of ideologically-based groups justifying acts of war and hostility against other nation states or groups. We isolated parts of their speeches in which they spoke about the outgroups they despised, at three different times before an identified act of aggression. We coded the emotional content of these identified statements using two different teams of emotion annotators using two independently derived annotation systems. As a comparison, the speeches of leaders of ideologically-motivated groups that did not escalate to violence were also analyzed. Analyses of both sets of codings indicated support for the hypothesis that anger, contempt, and disgust escalated in the months immediately prior to aggression in the groups that committed such an act; but those same emotions did not change for the groups that did not commit an act of aggression.

Year 2

In the second year of the project we tested the same ideas by analyzing the nonverbal expressions of emotion in videotaped speeches of leaders of ideologically motivated groups as the groups moved toward either committing an act of violence or not. We obtained source records of videos of such leaders that met our experimental criteria, transcribed the speeches, and annotated the parts of the speeches that directly referenced outgroups (and those that did not). A separate set of coders then coded the emotions they perceived as being expressed in the videos of the speeches. The emotions coded were anger, contempt, disgust, fear, joy, sadness, and surprise.

Speeches associated with acts of aggression (AoA) had significantly greater expressions of anger, contempt, and disgust than did speeches associated with non-violent acts of resistance (AoRs). More importantly, there were greater expressions of anger, contempt, and disgust when the outgroups were mentioned, compared to the non-outgroup topics, but only for AoAs and not AoRs (see Figure 1). These group differences were not associated with the actual words used in the speeches, thereby implicating the nonverbal expression of emotions.

Figure 1

Sample Findings from Year 2
Year 3

In years 3 and 4, we conducted three laboratory studies in which we examined whether the elicitation of anger, contempt and disgust in members of political groups causally increased thoughts, feelings, or behaviors related to hostile or aggressive acts. In all three laboratory studies, we recruited members of political groups that had a group opposed to its cause. We elicited a combination of either anger-contempt-disgust (ANCODI) or fear-sadness (as a comparison), and examined the resulting changes in hostile cognitions (Study 3), hostile language (Study 4), and hostile behavior (Study 5) in relation to the opponent outgroup or a neutral outgroup.

The results from all three studies demonstrated that ANCODI produced more hostile cognitions, language, and behavior against the opponent outgroups than did other negative emotions (see Figure 2). These results extended the studies from years 1 and 2 by showing a causative link to the building blocks of hostile thoughts, feelings, or actions. See Figure 2 for an example of one of the findings.

Year 4

In Year 4, we conducted an additional laboratory study (Study 6) in which we examined whether the elicitation of anger, contempt and disgust in members of political
groups causally increased thoughts, feelings, or behaviors related to hostile or aggressive acts. The purpose of this study was to address one of the limitations of the previous studies, that the emotion prime manipulations were essentially coincidental to the outgroup manipulations. In this study we primed the emotions to be directly related to an action of the outgroup. As before, we recruited members of political groups that had a group opposed to its cause. We elicited a combination of either anger-contempt-disgust (ANCODI) or a comparison mix of emotions, and examined the resulting changes in attitudes toward the opponent outgroup or a neutral outgroup.

The results demonstrated that ANCODI produced more hostile cognitions, language, behavior, and attitudes against the opponent outgroups than did other negative emotions (see Figure 3). These results complemented and extended the studies from the previous years by showing a causative link to the building blocks of hostile thoughts, feelings, or actions using an emotion prime that was not coincidental to the outgroup manipulations (see Figure 3 for an example of one of the findings).
Potential Impact or Translation to Military Applications

Monitoring the expression of emotions by group leaders may provide not only early warning mechanisms of impending possible aggression, but also a method to gauge the effects of one’s own group’s actions on other groups. Developing systems to assess emotions among members of groups, and at different levels within the groups, may provide a way to gain insights about the degree to which emotion sharing may occur within groups, which may be important for political justification of leader decisions and thus predict possible behavioral group reactions. Such systems may be akin to rumor-monitoring systems that are useful in assessing counter-insurgency operations in many areas of the world, where the battle concerning knowledge and information is as important as kinetic operations.
Performance Metrics

- Two invited talks
- Four book chapters/sections
- Seven articles published in scientific, peer-reviewed publications (includes two currently under revision and resubmission)
- One article published in transitional publications for specific user communities (FBI Law Enforcement Bulletin)
- Seven conference presentations
Bibliography

Invited Talks


Book Chapters and Sections


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**Other Publications**


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San Francisco State University

Grant/Contract Title
The full title of the funded effort.
   Emotions and Intergroup Relations

Grant/Contract Number
AFOSR assigned control number. It must begin with "FA9550" or "F49620" or "FA2386".
   FA9550-10-1-0544

Principal Investigator Name
The full name of the principal investigator on the grant or contract.
   David Matsumoto

Program Manager
The AFOSR Program Manager currently assigned to the award
   Benjamin Knott

Reporting Period Start Date
   04/01/2011

Reporting Period End Date
   03/31/2015

Abstract
The overall goal of this project was to examine the role of emotions, and specifically anger, contempt, and
disgust, in facilitating the build up to aggression and violence. (Year 1 of this project was fulfilled under a
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Archival Publications (published) during reporting period:
See listing in Final Report

Changes in research objectives (if any):
None

Change in AFOSR Program Manager, if any:
Project originally started with Terry Lyons
the next PM was Joseph Lyons

Extensions granted or milestones slipped, if any:
None

AFOSR LRIR Number
LRIR Title
Reporting Period
Laboratory Task Manager
Program Officer
Research Objectives
Technical Summary

Funding Summary by Cost Category (by FY, $K)

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Appendix Documents

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