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I am submitting herewith a dissertation written by William Adam Powell entitled "Examining the Nature and Consequences of Interfunctional Bias in a Corporate Setting." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Business Administration.

David W. Schumann, Major Professor

We have read this dissertation and recommend its acceptance:

Daniel J. Flint, Theodore P. Stank, Timothy P. Munyon

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

**Examining the Nature and Consequences of
Interfunctional Bias in a Corporate Setting**

A Dissertation Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

William Adam Powell
August 2016

Dedication

This dissertation is dedicated to my beloved wife, Karen Lynn Powell for her long suffering support and enduring trust and confidence in me, and to our horde of children who continually amaze me with their individual talents, potential, and capacity for love.

Acknowledgements

I would like to express sincere appreciation to the colleagues, faculty, and friends at the University of Tennessee and elsewhere who have advised, mentored, and otherwise guided my research. Thank you, first, to Dr. Sterling Bone who fostered my earliest interest in research, providing me the mentorship I needed to pursue a PhD. Thank you to Dr. Charles Noble, Dr. Chad Autry, Dr. Mark Moon, Dr. Stephanie Noble, and the other faculty in the department of marketing and supply chain management at the University of Tennessee, who guided my education and provided me with the skillset necessary to accomplish this research. Included in this thanks are Drs. Lowell Gaertner and Garriy Shteynberg, for their instruction and early guidance in the development of this dissertation. Thanks also to current and former doctoral students, especially Drs. Anton Fenik, Matthew Shaner, and Bill Rose, for serving as sounding boards and positive examples to me in my research. I am also grateful to Paul Dittmann and supporting members of the supply chain forum, and Dr. Shay Scott for helping me obtain a sample of supply chain employees for this research. In addition, the department of marketing and supply chain management at the University of Tennessee should be recognized for its major contribution to this dissertation through generous doctoral funding, and I extend thanks to those who made this possible. I would also like to thank my committee, Dr. Tim Munyon, Dr. Dan Flint, and Dr. Ted Stank, for their advisement, feedback, and support throughout this process. Finally, my most heartfelt thanks goes out to Dr. David Schumann, whose belief in me, academic experience and skill, patience, and friendship has made this dissertation possible.

Abstract

Interfunctional bias is examined in this dissertation as a potential barrier to interfunctional cooperation. Interfunctional cooperation is desirable in modern corporate organizations as a contributor to effective service delivery, operations planning, and sales performance. Interfunctional stereotyping, prejudice, and discrimination are hypothesized to relate positively, and together provide the bias-based theoretical basis through which barriers to interfunctional cooperation can be more thoroughly understood. Based on the extant literature in marketing and psychology, competing models of interfunctional bias are developed and hypothesized. In the first of three studies a questionnaire-based survey of supply chain employees' perceptions of salespeople permitted the examination of the hypothesized antecedent relationships of interfunctional stereotyping strength, including functional identification, organizational identification, trait negative affect, and conditions of bias-reducing contact. The results of study one suggest that employees' organizational identification, trait negative affect of the employee, and an equal status between the functional groups directly relate with interfunctional stereotyping strength. Furthermore, interfunctional prejudice is positively related with interfunctional stereotyping strength and negatively related with employees' internal motivation to respond without prejudice. Studies 2 and 3 employed experiments designed to examine the relationships between interfunctional stereotyping strength, prejudice, and discriminatory behavioral intentions, and included the following predicted moderating factors: internal motivation to respond without prejudice, monetary incentives to cooperate, and positive social norms. The positive relationship between interfunctional stereotyping, prejudice and discrimination was confirmed in both studies. As well, a hypothesized three-way interaction resulted between stereotyping strength, internal motivation, and external motivators when

predicting prejudiced attitudes. There are several managerial and theoretical implications. First, the superordinate identity and equal status between functional groups should be considered in attempts to reduce interfunctional stereotyping. Second, the influence that individual-level variables such as internal motivation and trait negative affect can have on interfunctional stereotyping and prejudice provides insights into hiring considerations. Third, monetary incentives and positive social norms can be a positive influence toward reducing prejudice for those who are not internally motivated to be non-prejudiced. Finally, interfunctional bias as a barrier to interfunctional cooperation is empirically supported.

Table of Contents

Chapter 1 - Introduction.....	1
Describing the Phenomenon of Interest.....	1
Functional Units and Interfunctional Cooperation in the Organization.....	2
Challenges with Interfunctional Cooperation	4
The Interfunctional Bias Perspective	5
Topical justification	6
Projected Contributions	9
Research Objective	11
Research Questions.....	12
Dissertation Overview	12
Chapter 2 – Literature Review	14
Introduction.....	15
Model Overview	15
The Adoption of Intergroup Bias to Corporate Organizations: Interfunctional Bias	22
1. Bounded Cognitive Capacity: Automatic Assimilation and Differentiation.....	23
2. Social Group Formation Outside and Inside of Organizations.....	25
3. The Need for and Source of Positive Social Identity	28
4. The Three Domains of Interfunctional Bias: Stereotyping, Prejudice, and Discrimination.....	30
Two Approaches to Interfunctional Bias Research	36
The Functional Identification Antecedent	36
Empirical Support of the Functional Identification Antecedent	40
Competing Hypotheses of the Antecedents of Interfunctional Stereotyping Strength	43
Individual-Difference Moderators	44
Interfunctional Contact and Conditions of Prejudice Reduction	48
Equal Status	52
Interpersonal Interaction	52
Cooperative Interdependence.....	53
Supportive Norms of the Organization	54
The Relationships between Interfunctional Stereotyping, Prejudice, and Discrimination	56
The Relationship between Interfunctional Stereotypes and Prejudice	56
The Relationship between Interfunctional Prejudice and Discrimination	57

The Influences of IMS and External Motivators to be Non-prejudiced	59
Internal Motivation to Respond without Prejudice	60
External Motivators to be Non-prejudiced	61
Conclusion of Chapter 2	63
Chapter 3 – Methods	64
Abstract	65
Introduction	65
Study 1	67
Data Collection and Sample	67
Operationalization of the Proposed Variables	68
Measurement Refinement and Use	82
Question Ordering Due to Priming Concerns	83
Study 2	83
Sample	84
Experiment Introduction	85
Experimental Manipulations	85
Measures of Prejudice and Discriminatory Behavioral Intentions	88
Conclusion of Chapter 3	89
Chapter 4 – Essay 1	90
Abstract	91
Introduction	92
The Adoption of Intergroup Bias to Corporate Organizations: Interfunctional Bias	95
Bounded Cognitive Capacity: Automatic Assimilation and Differentiation	95
Social Group Formation Outside and Inside of Organizations	96
The Need for and Source of Positive Social Identity	97
The Domains of Interfunctional Bias: Stereotyping, Prejudice, and Discrimination	98
“Stereotypes represent the cognitive component of prejudice” (Dovidio et al. 1996, p 283), meaning that prejudices have a strong relationship with the belief component of bias.	98
Critical Test of Theory: Testing Two Models of Interfunctional Bias	99
The Functional Identification Antecedent of Interfunctional Stereotyping	100
Organizational Identification, Moderation or Direct Effect	103
Personality Variable of Interest	105
Conditions of Contact and Their Role in Interfunctional Bias	106
The Relationship between Interfunctional Stereotypes and Prejudice	108
Internal Motivation to Respond without Prejudice	109

Method	110
Sample.....	111
Measures	114
Testing for Normality and Initial Model Fit	120
Convergent and Discriminant Validity	122
Common Method Bias	123
Results.....	126
Model A	126
Model B	128
Model Comparison.....	129
Discussion	130
Limitations and Conclusion	134
Chapter 5 – Essay 2.....	136
Abstract	137
Introduction.....	138
The Psychological Basis for Interfunctional Bias.....	139
Bounded Cognitive Capacity	140
Social Group Formation.....	142
The Need for Positive Social Identity	142
The Three Domains of Interfunctional Bias	144
The Stereotyping Beliefs Domain of Interfunctional Bias	144
The Prejudiced Attitudes Domain of Interfunctional Bias	146
The Discrimination Domain of Interfunctional Bias	146
A Model of Interfunctional Bias	147
The relationship between Stereotyping and Prejudice.....	148
Internal Motivation to Respond without Prejudice.....	148
External Motivators to be Non-prejudiced	151
The Dual-effect of IMS and External Motivators to be Non-prejudiced.....	152
The relationship between Prejudice and the Intent to Discriminate	153
Method	155
Operationalization of independent variables.	155
Pilot Study Test of Manipulations	157
Study 1	159
Measures	159

Data Refinement and Validation.....	162
Study 1 Results	164
Study 1 Discussion.....	168
Study 2	169
Study 2 Instrument.....	169
Data Refinement and Validation.....	170
Study 2 Results	171
Study 2 Discussion.....	175
General Discussion	176
Limitations and Conclusion	178
Chapter 6 - Conclusion	180
Dissertation Overview	181
Managerial Implications	182
Theoretical Implications/Contributions	183
References.....	186
Vita.....	204

List of Tables

Table 1 – Organizational Positions of Sample	121
Table 2 – Endogenous Variable Composite Reliability Scores and Item Path Weights	124
Table 3 – Exogenous Variable Item Path Weights and Composite Reliability Scores	127
Table 4 – Correlation Matrix with Square Root of AVE on the Diagonal, and Reporting of AVE, MSV, and CR for Each Construct in the Measurement Model	133
Table 5 – Results of Hypothesis Testing Via Structural Model Path Analysis	136
Table 6 – Reporting of Study 1 Regression Analyses Testing Hypotheses	173
Table 7 – Reporting of Study 3 Regression Analyses Testing Hypotheses	181

List of Figures

Figure 1 – Interfunctional Bias Model A	26
Figure 2 – Interfunctional Bias Model B	27
Figure 3 – Interfunctional Bias Model A: Functional Identification Antecedent with Moderators	108
Figure 4 – Interfunctional Bias Model B: Direct Effects Antecedents without Moderators ..	109
Figure 5 – The Hypothesized Model of Interfunctional Bias	157
Figure 6 – Results of the Study 1 Test of a Model of Interfunctional Bias	174
Figure 7 – Three-way Interaction between Internal Motivation, Incentives and Stereotyping, on Prejudice	176
Figure 8 – Results of the Study 2 Test of a Model of Interfunctional Bias	182
Figure 9 – Three-way Interaction between Internal Motivation, Social Norms and Stereotyping, on Prejudice	184

List of Abbreviations

IFB	interfunctional bias
IMS	internal motivation to respond without prejudice

Chapter 1 - Introduction

Describing the Phenomenon of Interest

“Some of the key words that I would use to describe people in my sales department: Aggressive, shallow, vague, passionate, overselling, disloyal, ostentatious, arrogant, proud, presumptuous”

- Anonymous pilot study participant

Anecdotally, statements like this one are not uncommon in the workplace. While such comments may seem harmless, these generalized beliefs held by one group of individuals about another group, likely represent stereotypes that can result in prejudicial attitudes toward the former group by the latter. Individuals have a pervasive tendency to judge others based solely on any salient out-group membership (Tajfel 1978). An out-group is defined as a group of people who are perceived as differentiated in some real or imagined way from the group of people to which one has perceived real or imagined similarity (Brewer 1993). Instead of racism, sexism, ageism or the other demographically-based isms about which prejudice is typically discussed and investigated, prejudice can also be found between functional groups within organizations (Keaveney 2008). Individual employees' subsequent behaviors towards those within another function may be based on a set of generally held beliefs and attitudes, resulting in irrational, subjective, and otherwise unfair treatment of others. The examination of this phenomenon within organizations is very important in light of the often desired or required level of cooperation between functions that permit the organization to operate. This research is especially critical in the marketing context, as marketing serves a boundary-spanning function (Moorman and Rust 1999), with cross-functional integration as a component of market orientation (Narver and Slater 1990; Slater and Narver 1995).

Drawing from the work on social identity theory in psychology (Tajfel and Turner 1979) and marketing (Fisher, Maltz, and Jaworski 1997), competing models of interfunctional bias are proposed and empirically tested in this dissertation. Briefly, interfunctional bias refers to the systematic tendency of individuals to have beliefs about, hold attitudes toward, and exhibit behavior toward others based on their functional membership. This chapter will take the reader through an introduction to the importance of functional units and interfunctional cooperation within organizations, the challenges that interfunctional cooperation present, and an explanation of *interfunctional bias* as a potential inhibitor of interfunctional cooperation. A topical justification for the use of social identity theory in interfunctional research will be discussed and the projected contribution of this research will then follow. Finally, research objectives and research questions will be presented.

Functional Units and Interfunctional Cooperation in the Organization

Many if not most large corporations today depend on an organizational structure dominated by relatively autonomous functional units, as opposed to a cross-functional or matrix organization (Ford and Randolph 1992). Even when organizations attempt to integrate internal functional units into workgroups, the importance of functional roles remains (Wolf and Egelhoff 2013). Functional units are natural partitions within corporations responding to the nature and volume of work, relying on individuals with functional training and experience (Van Maanen and Barley 1984). These units have clear operational boundaries and conduct only an allotted portion of the business. A functional unit is defined by a group of employees who share common roles within a larger organization, and conduct their duties alongside others who fill similar roles (e.g. Astley and Zajac 1990). Social cohesion and group formation within

functional units is not necessarily an eventuality, but given the interdependence and similarity within functional units, their assimilation tends to be represent the strongest group formation within an organizational environment (Riketta and Dick 2005).

The struggle of firms to achieve functional unit cooperation between differentiated groups has been a topic in management for the past fifty years, or more (Seiler 1963). Early work on interdepartmental or lateral relationship conflict considered the negative effects of interfunctional conflict (Stymne 1968) and ways to reduce such conflict (Walton 1967; Walton and Dutton 1969). The field has largely concluded that interfunctional cooperation is necessary for the efficient and effective operation of a corporation. As Seiler (1963) put it, unsuccessful interdepartmental relationships are responsible for “siphoning energy away from the productive work” (p 128). Part of this siphoning effect was further described by Walton et al. (1969): “Interdepartmental conflict means there is interference rather than considerateness, information is distorted or withheld, and attitudes of annoyance and distrust exist between departments” (p 526). Firms benefit from the differentiation and specialization of functional units, and yet, “each subsystem perform[s] a portion of [a] task, and the efforts of each being *integrated to achieve effective performance of the system*” (Lawrence and Lorsch 1967). Thus the cooperation between specialized functional units is viewed as necessary to conduct business and advance competitive advantage (See also: Esper et al. 2010). Research that seeks to reduce the conflict between functional units of the firm does so in order improve interfunctional cooperation and resulting productivity outcomes.

This marketing-based dissertation takes the position that the marketing function is a boundary-spanning unit, touching many of the key operational components of the organization (Narver and Slater 1990; Ruekert and Walker Jr 1987). For example, one of the important

functions of marketing in many organizations is the customer interfacing role that the sales force plays on behalf of the other functional units (Moorman and Rust 1999). Presenting one consistent face of the organizations is important to the organization. However, failure of the sales force to effectively work with other functional departments can hinder customer-facing consistency, resulting in reduced sales and firm performance (Homburg et al. 2011; Homburg, Workman Jr, and Krohmer 1999). Therefore, the cooperation or conflict that the sales force experiences with other functional units can have a deleterious impact on the organization.

Challenges with Interfunctional Cooperation

Anecdotal and empirical evidence continues to suggest that interfunctional cooperation remains a stumbling block for many firms. For example, sales and operations planning (S&OP) was developed in the late 1970s (Iyengar and Gupta 2013), and is an operational activity that requires interfunctional cooperation (Esper et al. 2010). According to Iyengar and Gupta (2013), Gartner reported in 2010 that “70 percent of global organizations are in Stage 1 or Stage 2 of [a] four-stage S&OP maturity model (p11)”, suggesting that after decades this interfunctional activity has still not matured in most companies (See also Gartner 2014). Unfortunately, the reasons for S&OP failures were not provided nor speculated about anecdotally in this article.

Another prominent example of interfunctional cooperation is in new product development, which demands that research and development (R&D), and marketing and/or the sales functions, cooperate on some level (Troy, Hirunyawipada, and Paswan 2008). However, The Wall Street Journal reports that “some 69% of senior managers describe relations between marketing and R&D as collegial, but only 34% of mid-level managers saw the relationship that way” (Kotler, Wolcott, and Chandrasekhar 2009). Among the reasons given for these poor

relationships are interfunctional misattributions, misunderstandings, and the potential for bias. These practitioner accounts indicate that even after decades of research, problems with interfunctional cooperation still exist today.

The Interfunctional Bias Perspective

Academicians have recognized the importance of interfunctional cooperation and integration, and studies on these broad topics are prevalent in the marketing literature (Ellinger 2000; Esper et al. 2010; Luo, Slotegraaf, and Pan 2006; Narver and Slater 1990; Sethi 2000; Song, Montoya-Weiss, and Schmidt 1997; Troy, Hirunyawipada, and Paswan 2008). However, identifying and examining the root causes that inhibit this cooperation from occurring are often overlooked in the business literature. Understandably, focus has historically been given to the applicable mechanisms for interfunctional cooperation, such as knowledge sharing (Fisher, Maltz, and Jaworski 1997) and integration (Esper et al. 2010). These tactics for encouraging cooperation may arguably be related to interfunctional bias, and may actually improve cooperation as a function of bias reduction.

Decades of work in social psychology suggest that disparate groups of people will hold biased beliefs (stereotypes) and attitudes (prejudices), and act discriminatorily towards each other (Oakes 2008; Slater and Narver 1995; Tajfel et al. 1971; Tajfel and Turner 1979; Turner and Reynolds 2001). Yet, the marketing academy has only begun to apply this well-developed and empirically tested proposition to marketing contexts. Given the formation of distinct function-based groups within organizations, it is reasonable to suggest that intergroup bias plays some role in interfunctional relationships. This dissertation addresses this gap in the literature by examining intergroup bias (Brewer 2001; Brewer 2003; Hewstone, Rubin, and Willis 2002) as an

explanation for dysfunctional cooperation between distinctive functional units within companies. Intergroup bias, as it relates to corporate functional groups, will be termed “interfunctional bias.” In this dissertation, interfunctional bias will be examined as an individual tendency, although it is likely that the aggregate of individual biases may lead to a group bias that may also be desirable to study.

This dissertation asserts that generalized negative influential beliefs about other functional units and corresponding negative attitudes may lead to a lack of cooperative behavior (Hewstone, Rubin, and Willis 2002). The purpose of this research is to explore the existence of interfunctional bias held by supply chain functional units (i.e. purchasing, operations, and logistics personnel) towards the sales function within a company. Beyond confirming the existence of bias, this research develops and tests competing models of interfunctional bias that examine key antecedents, resultant attitudes and behaviors, and the role of multiple predicted moderators.

Topical justification

Anecdotal evidence of the existence of interfunctional bias is subtle and abundant. Qualitative evidence of the existence of interfunctional bias is also available (Keaveney 2008). In preparation for this dissertation, to further validate interest in this topic and better identify possible stereotypes, a survey of 104 supply chain professionals was conducted and open responses regarding their beliefs about the sales force in their organization were collected. One-fifth of the respondents freely offered at least one or more pejorative words when asked to provide key words they would use to describe people in the sales department. Selfish, disloyal, pushy, overbearing, arrogant, and manipulating are among the most prominent negative

stereotypical beliefs expressed by these survey-takers, while a number of positive beliefs were also expressed (e.g. salespeople are outgoing, resourceful, and motivated). These generalizations were not related to whether the respondent had worked in sales previously, nor were they restricted to purchasing, operations, or logistics types of supply chain professionals. These generalized beliefs provided initial evidence that interfunctional bias exists and may play a role in the hindrance of interfunctional cooperation.

A prominent stream of research in interfunctional cooperation acknowledges the formation of social groups within functional units (Albert and Whetten 1985; Ashforth and Mael 1989; Hogg and Terry 2000), and applies group formation, or social identity theory, to the study of interfunctional cooperation (Cadogan et al. 2005; Fisher, Maltz, and Jaworski 1997; Richter et al. 2006). Each of these identity studies considers the natural and systematic tendency individuals have to seek identification with others they perceive as part of their social group (Albert and Whetten 1985; Ashmore, Deaux, and McLaughlin-Volpe 2004). This identification strengthens “in-group” resolve (Hogg and Terry 2000) and diminishes interfunctional cooperation (Cadogan et al. 2005). The study of identity-based intergroup phenomena has a rich theoretical and empirical history in the fields of social psychology (Brown and Gaertner 2001; Hogg and Abrams 2001) and management (Ashforth and Mael 1989; Hogg and Terry 2000).

One of the primary applications of social identity theory is in the work on *intergroup bias*, which is reflected through the in-group members’ stereotyping of, and prejudice and discrimination toward the “out-group” (Brewer 2003; Hewstone, Rubin, and Willis 2002). Among the most salient biases in society today is racial bias, which is exhibited in the beliefs, attitudes, and behaviors directed toward persons of another race, based solely on the race of the individual (Johnson, Olson, and Fazio 2009; Shelton and Richeson 2006). Another example of

intergroup bias is seen in ageism, or applying beliefs and attitudes toward someone based on their age (Levin and Levin 1980; Perdue and Gurtman 1990). Gender and sex-role biases have also been considered in the social psychology literature (Kray, Thompson, and Galinsky 2001), as well as in the sales literature (McElroy and DeCarlo 1999). In addition to these, as Tajfel (1970; 1979) found in his landmark studies, intergroup bias can be applied to virtually any social group formation.

Hewstone et al. define intergroup bias as “the systematic tendency to evaluate one’s own membership group (the in-group) or its members more favorably than a non-membership group (the out-group) or its members” (2002 p576). Intergroup bias encompasses 1) stereotyping beliefs about the out-group, 2) attitudes held about the out-group and its members (i.e., prejudices), and 3) discriminatory behavior directed toward the out-group (Mackie and Smith 1998; Wilder and Simon 2001). Applying this definition and these dimensions specifically to functional units within organizations, interfunctional bias can thus be defined as the systematic tendency to evaluate one’s own function or its members more favorably than other functions within the organization, and/or members of the other functions (Hewstone, Rubin, and Willis 2002). Likewise, interfunctional bias comprises three elements: stereotype beliefs towards other functions and their members, attitudes held about other functions and their members, and discriminatory behavior directed toward other functions and their members within the firm.

While functional and organizational identification have been studied and applied in the marketing literature (Fisher, Maltz, and Jaworski 1997), the study of bias that can occur between individuals as they perceive another function has scarcely been approached. In the sales literature, only two studies of bias have explored the stereotyping beliefs that salespeople hold about those in the corporate headquarters (the out-group), and relate these beliefs to sales

performance (Homburg et al. 2011; Wieseke et al. 2012). The beliefs captured in these studies were indeed generalizations of the out-group and therefore qualify as stereotypes (Stangor 2009; Stangor and Lange 1994). In another example of the study of intergroup bias in organizations, a seminal psychological study on out-group denigration by Tajfel (1971) was replicated in a medical organization, and intergroup bias between the organization's functions was observed (Hennessy and West 1999). Finally, Keaveney (2008) collected marketers' stereotyping beliefs of engineers, and vice versa, in a qualitative analysis of attributions between these functional groups. Besides these notable exceptions, the literature is void of research that frames or hypothesizes intergroup bias between functional groups, or that tests such a framework or hypotheses. This dissertation attempts to fill this gap in interfunctional research by developing two hypothesized models of interfunctional bias based on a review of literature in business administration and psychology, and examining the hypothesized models through a series of empirical studies.

Sethi (2000) takes the effects of functional identification further than previously studied by suggesting that "preference for the orientation of one's own functional area over others' creates and sustains interfunctional biases and stereotypes" (, p 332). However, the only cited empirical reference for interfunctional bias in this study is from work on intergroup bias and not interfunctional bias. Hence, this research appears to be the first in the marketing literature to suggest that functional identification creates interfunctional bias (Sethi 2000).

Projected Contributions

This dissertation makes several important contributions to both scientific and managerial knowledge. These are listed below and each shall be discussed in turn.

1. Adapting the phenomenon of intergroup bias to the study of interfunctional relationships in business organizations
2. Extending the marketing literature on interfunctional bias by examining antecedents and other directly influencing and attenuating variables, of interfunctional stereotyping belief strength, prejudiced attitudes, and discriminatory behavioral intentions.
3. Demonstrating the existence of interfunctional bias and relevant variables that either directly influence bias or moderate the relationships between the domains of interfunctional bias, and informs managers of the actions to be taken based on these findings.

The examination of interfunctional bias is the primary contribution of this dissertation. The pervasive and automatic nature of biased beliefs, and consequent attitudes and behaviors, make bias an imperative topic for study in corporate organizations. Despite this, prior research on interfunctional bias has been limited to its use as the justification for the efficacy of a superordinate identity in interfunctional relationships (Sethi 2000). Intergroup bias has been heavily examined in the social psychology literature on group differences, but rarely considered as it might apply to relationships between corporate functions.

More specifically, this dissertation will potentially contribute to the literature by testing competing models of interfunctional bias. In the first, a predicted antecedent relationship between an individual's level of functional identity on the strength of the stereotype(s) they hold about another function will be examined. This relationship is further tested with moderators including individual differences (neuroticism; organizational identity) as well as the contact hypotheses (Amir 1969; Hewstone and Brown 1986), which is a yet unexplored construct in interfunctional literature. In the second competing model, functional identity is not a sole

antecedent, as the other variables that were examined as moderators are now treated as antecedents.

The literature on one's internal motivation and prejudice suggests that one's value system, or their personal conviction to avoid making generalized judgments about others, attenuates the relationship between stereotyping and prejudice (e.g., Devine, 2002). The interfunctional bias context is unique to this literature on *responding without prejudice*, and this dissertation further extends the literature through the examination of internal motivation in this context. Furthermore, the interfunctional bias context permits the manipulation or control of external sources of motivation to be non-prejudiced. This research will therefore be uniquely positioned for the examination of external motivators for their direct and moderating effects on interfunctional prejudice and the relationship between stereotyping strength and prejudice. As well, the interaction between these external motivators and internal motivation would provide an important contribution to the interfunctional and intergroup bias literature.

The detection of interfunctional bias has significant potential managerial implications. Not only will the model provide insights into interfunctional bias as yet another potential contributor to interfunctional conflict, but the examination of the variables within the model may provide managers with insights into the reduction of the deleterious effects of interfunctional conflict.

Research Objective

The objective of this dissertation is to present and test competing models of interfunctional bias developed from the literature on intergroup bias and interfunctional bias. The phenomenon of interfunctional bias incorporates the relationships between stereotyping,

prejudice, and discrimination. This phenomenon is expected to reflect an overall in-group favoritism and out-group denigration. The models also contains hypothesized antecedents, directly relating variables and variables moderating the relationships between the domains of interfunctional prejudice.

Research Questions

The research questions posed in this dissertation are based on the objectives covered above.

- 1) Will the relationships between the intergroup bias components, i.e., stereotyping, prejudice, and discrimination, emerge within the corporate context of functions?
- 2) Does one's level of identification with a function lead to stereotyping of other functions or is this relationship better explained using additional individual and group-level variables?
- 3) If the functional identification antecedent relationship exists, will certain individual differences and interfunctional moderators attenuate the relationship?
- 4) To what degree does one's prejudice towards another function lead to discriminatory behaviors towards that function when asked or required to work together?
- 5) If the relationship between interfunctional prejudice and discrimination exists, will certain motivational moderators attenuate the relationship?

Dissertation Overview

This dissertation will proceed with chapter two, which first contains a brief review of the competing models of interfunctional bias. Following this, an in-depth review of the literature on

intergroup bias and its relevance to the phenomenon of interest will be provided. The remainder of the second chapter presents the variables in the model through a review of the literature, and the relationship between each is justified and hypothesized.

Chapter 2 – Literature Review

Introduction

This chapter provides a review of the literature that supports this dissertation's proposed models of interfunctional bias and provides justification for their hypotheses. Adopted from the psychological phenomenon of intergroup bias (Ashforth and Mael 1989; Hewstone, Rubin, and Willis 2002), the proposed models of interfunctional bias will be described first. Second, the adoption of intergroup bias in interfunctional contexts will be reviewed and the variables in interfunctional bias will be elaborated upon and hypothesized. Third, functional identification, with supporting literature, will be discussed in the context of group formation in organizations, and the relationship between functional identification and interfunctional stereotype strength will be hypothesized. Fourth, alternative antecedents and their potential roles as moderators of the hypothesized relationship between functional identification and interfunctional stereotypes will be described, with accompanying hypotheses. Fifth, internal motivation to respond without prejudice (IMS) and external motivators to be non-prejudiced will both be considered as either moderators of the relationship between stereotypes and prejudice, or as direct influences of prejudice. Sixth, the direct relationship between interfunctional prejudiced attitudes and discriminatory behavioral intentions will be hypothesized. Finally, this chapter will conclude with a summary of the competing models of interfunctional bias and hypothesized relationships. The two models appear below in Figures 1 and 2.

Model Overview

Pioneering research in psychology by Henry Tajfel (Tajfel 1970) found that randomly dividing people into arbitrary groups prompts preferential treatment toward the group to which one belongs, to the detriment of other groups. This favoritism for the "in-group" and derogation of

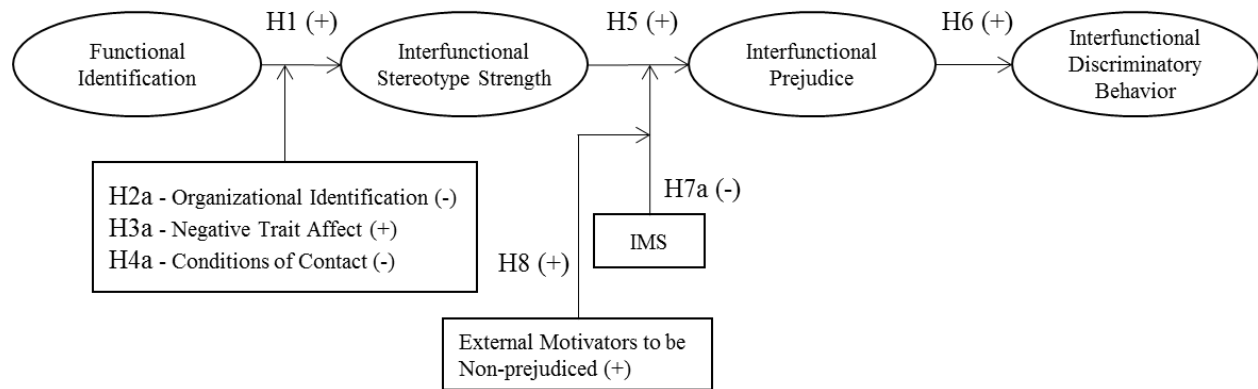


Figure 1 – Interfunctional Bias Model A

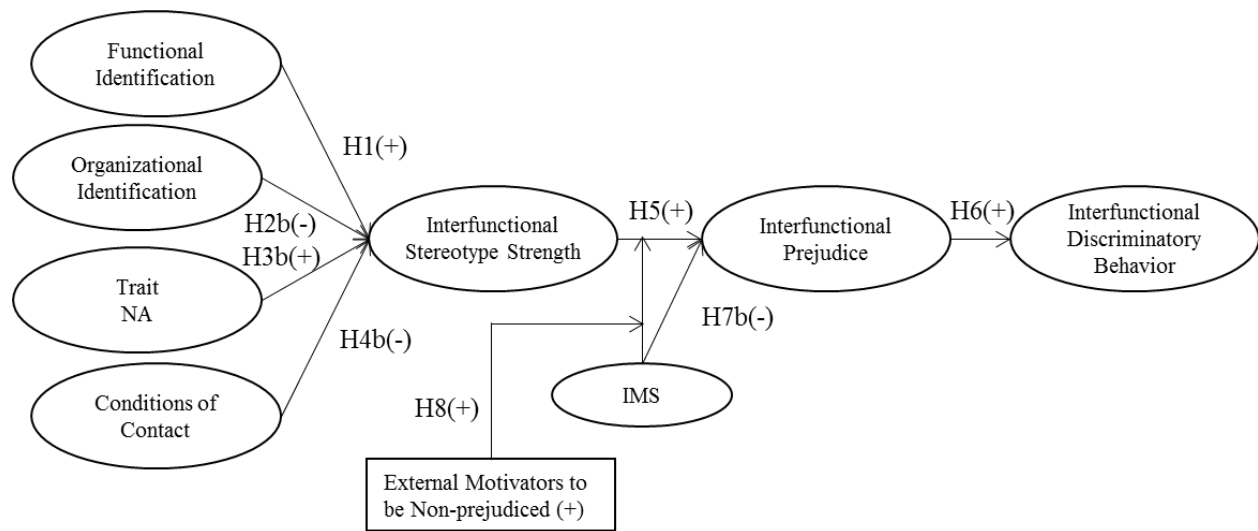


Figure 2 – Interfunctional Bias Model B

the “out-group” has been labeled *intergroup bias* (Wilson and Kayatani 1968). Intergroup bias is motivated by an inherent need that individuals have for positive social identity (Hewstone, Rubin, and Willis 2002). Through assimilation with the in-group and differentiation from the out-group, individuals can gain social identity that they perceive as favorable (Tajfel 1978). Maintenance of positive social identity occurs through ongoing intergroup bias (Crocker et al. 1987; Wood, Michela, and Giordano 2000). Intergroup bias is exhibited through stereotyping beliefs, prejudicial attitudes, and/or discriminatory behavior (Hewstone, Rubin, and Willis 2002).

Research on intergroup bias has historically examined social issues such as biases against minorities, females, and the elderly (Paluck and Green 2009) and has only recently been examined in business and marketing contexts (Hennessy and West 1999; Homburg et al. 2011; Sethi 2000; Wieseke et al. 2012). For purposes of this dissertation, intergroup bias is considered within the context of the firm. A firm is typically composed of a set of functions (e.g. accounting, marketing, logistics, purchasing, operations), each consisting of specialists. Extrapolating from the intergroup bias literature in psychology, members of one function can be expected to favor that function in comparison to the other functions. As noted in the literature below, this functional favoritism within the firm has been labeled *interfunctional bias* (Sethi 2000).

Borrowing from the intergroup bias literature, *interfunctional bias* is defined as the systematic tendency to evaluate one’s own function unit or its members more favorably than other functions in the organization, or its members (Hewstone, Rubin, and Willis 2002; Wilder and Simon 2001). Interfunctional bias begins with the formation of stereotyping beliefs about other functional groups and respective group members. Stereotyping beliefs can form when individuals identify with their own functional group, thereby deeming others as out-groups and

out-group members (Sethi 2000). As depicted in the model, group formation around organizational functions elicits stereotyping beliefs, or beliefs that are a generalization of the other functions (Hilton and Von Hippel 1996; Homburg et al. 2011). These generalizations may not be accurate because they describe the out-group functions and their members homogeneously, despite the heterogeneity inherent among individuals (Stangor 2009). Stereotypes can vary based on their strength or extent to which the belief is held, as well as their valence or degree of positivity or negativity (Dovidio et al. 1996).

Past research in marketing has positioned functional identification or some combination of functional and organizational identification as the mechanism by which interfunctional bias can be studied (Cadogan et al. 2005). This functional identification-focused approach to interfunctional bias, wherein “strong functional identities of individuals in the firm give rise to interfunctional biases” (Sethi 2000, p 332), is depicted in figure 1. In this first presented model, model A, functional identification is hypothesized to be the sole antecedent of interfunctional stereotyping strength. The existence of functional identification among employees is evidence of the demarcation of employees into groups within the organization and likely existence of interfunctional bias (Hennessy and West 1999). As individuals more strongly identify with their function, their propensity to view outside functions as out-groups and treat out-group members accordingly, increases (Ashforth and Mael 1989). Therefore, functional identification is an indication of group formation, which is the basis for intergroup and interfunctional bias in model A.

Identification is dynamic and any number of identities can be held by an individual, given the context (Ashforth and Johnson 2001). Therefore, model A also includes organizational identification as an individual-level moderator of the relationship between functional

identification and interfunctional stereotype strength. Although the marketing literature most often positions organizational identification relative to functional identification or as interacting with functional identification, it is not requisite in the psychology literature that a superordinate identity be studied in this way. Model B depicts organizational identification and functional identification as independent and direct antecedents of interfunctional stereotyping strength. Since each source of identification can exist in concert, considering each as an antecedent should provide meaningful insights into their relationship with interfunctional bias.

The major distinctions between models A and B are congruent with this idea of utilizing variables that are historically used to study bias either as moderators of the sole antecedent relationship between functional identification and stereotyping strength (Model A), or as direct antecedents alongside other antecedents (Model B). These variables include one additional employee-level variable, personality trait negative affect, or ones' propensity toward negativity in their feelings. As well, four variables, also from the psychology literature, that are studied for their effectiveness in reducing intergroup bias (Ben-Ari and Amir 1986), will also be studied as either moderators of the sole antecedent relationship or direct antecedents. These conditions of contact include equal status, interpersonal interaction, interdependence, and supportive norms (Gaertner et al. 1994).

Interfunctional bias also includes an attitudinal dimension. Therefore, stereotyping strength is hypothesized in both models to positively relate to interfunctional prejudicial attitude formation. Interfunctional prejudice, specifically, is a negatively held attitude that is directed toward the members of the another function (Stangor 2009). This negatively held attitude can be detrimental because it bolsters negative predispositions toward members of the pre-judged function. Even without previous exposure, negative attitudes about others can form through

stereotype-based prejudices (Allport 1954). Although strongly-held stereotypes of a positive nature may lead to a positive form of prejudice, the literature on prejudice is almost universally focused on negative attitude formation (Stangor 2009) and the present interest also calls for a focus on negative attitude formation.

Furthermore, the direct relationship between interfunctional stereotyping strength and interfunctional prejudicial attitude formation is influenced by the stereotype holder's IMS (Plant and Devine 1998). In model A, IMS is hypothesized to attenuate the relationship between stereotyping strength and prejudice, while in model B, IMS is hypothesized to have a direct effect on prejudice. External motivators to be non-prejudiced are likewise hypothesized in both models.

Finally, interfunctional bias ultimately concerns us with behaviors that result from prejudicial attitude formation. Prejudicial attitude formation leads to discrimination or behaviors in which bias is present (Cook 1978; Dovidio et al. 1996). Allport (1967) suggested that "an attitude characteristically provokes behavior" (p 8). These prejudice-provoked behaviors can be exhibited interfunctionally as avoidance, antilocution, or overt behaviors (Allport 1954) such as politicking or lying, to the detriment of the other functional unit. Consider also that the relationship between prejudice and discrimination is moderated by a social motivation. The desire of individuals to appear unprejudiced has been shown to influence one's behavior, when they are motivated to appear unprejudiced, and when their overt behavior is expected to be in public (Devine et al. 2002). The social norms of the context and likelihood of publicity, therefore influence the extent to which interfunctional prejudice formation leads to interfunctional discrimination.

A more in-depth review of the variables and relationships in the model, and development of the hypotheses follows. Specifically, the adoption of intergroup bias into the corporate context will be addressed first. This will include a review of the underlying phenomena of intergroup bias, and how these relate to interfunctional bias. As well, an overview of interfunctional bias and its three domains will be provided. Second, the antecedent relationships will be reviewed, including moderators of this relationship. Third, the relationships between the domains of interfunctional prejudice will be discussed, and the moderators of these relationship will conclude the review. Hypotheses of each relationship will be provided throughout.

The Adoption of Intergroup Bias to Corporate Organizations: Interfunctional Bias

Intergroup bias is the existence of systematic in-group favoritism and out-group derogation. As Hewstone et al. (2002) suggest, “Intergroup bias refers generally to the systematic tendency to evaluate one’s own membership group or its members more favorably than a non-membership group or its members” (p576). This systematic tendency is indicative of the nature of group formation, group membership, and the positive effects of a social collective (Ashmore, Deaux, and McLaughlin-Volpe 2004). The basic forms of intergroup bias are stereotypes, prejudice, and discrimination (Hewstone, Rubin, and Willis 2002; Mackie and Smith 1998).

Intergroup bias is referred to as “a general, but not necessarily universal, phenomenon” (Hagendoorn 1995), meaning that it is frequently observed, but exceptions keep it from being universally observed. This suggests that intergroup bias is contingent on antecedents and moderating variables, which we acknowledge and account for in the model. In addition, bias implies that the belief, attitude, or behavior has been judged as “unfair, illegitimate, or

unjustifiable, in the sense that it goes beyond the objective requirements or evidence of the situation” (Brewer 2003; Hewstone, Rubin, and Willis 2002). Taken together, intergroup bias is the tendency to favor one’s in-group and derogate toward one’s out-group, in a *generalized* manner.

Adopting intergroup bias to the marketing and organizational literature requires an assessment of several underlying aspects of intergroup bias, and their proposed operation within the organizational group context. These several considerations of intergroup bias include bounded cognitive capacity, social group formation, and positive social identity. From there, an overview of interfunctional bias, including its three domains will be provided.

1. Bounded Cognitive Capacity: Automatic Assimilation and Differentiation

The human mind encounters more objects in a time period than it can adequately store or recall. The mind is bounded by its capacity to store in memory those things it encounters and to recall those things as they are needed. However, the mind has also developed a powerful, if not flawed way to store memory and improve its recall capacity. Through the technique of categorization, objects that are similar are remembered together and recalled categorically. Categories are nested within other categories, and so on, until the whole of what can be remembered is catalogued into a cognitive structure. Simply, this categorization processing heuristic enables more memory capacity and faster recall, albeit at the potential expense of accuracy.

Although the categorization processing heuristic is viewed positively as a means of reducing mental processing and enabling mental operations beyond recall, it is also potentially inaccurate as a means of generalizing to individuals based on their group membership. Inferring

information about people based on their ethnicity, gender, or age is one aspect of categorization that is particularly questioned in western society and often viewed somewhat negatively because of its potential for inaccuracies and resulting biased behavior (Gaertner and Dovidio 1986). The same inaccuracies can occur between other social groups, such as functional subunits in organizations (Keaveney 2008). Having an understanding of categorization alone does not sufficiently explain the existence of intergroup bias, but it provides a foundation for understanding how groups form, why members assimilate with one another and disassociate with others, and how members of in-groups form beliefs about members of out-groups (Brewer 1993; Brewer 1991).

Central to group-based beliefs and attitudes is the existence of group prototypes. Representative attributes of groups that people hold in their cognition converge around a central concept of the category or group known as the prototype. "Prototypes are typically not checklists of attributes but, rather, fuzzy sets that capture the context dependent features of group membership, often in the form of representations of exemplary members (actual group members who best embody the group) or ideal types (an abstraction of group features)" (Hogg and Terry 2000). In addition to embodying the attributes of in-groups, prototypes help distinguish the in-group from other groups. The use of prototypes leads to similarities in the in-group to be cognitively maximized and in the out-group minimized. Groups are thus made distinct from other groups through prototypes.

Prototypes are observable in studies of functional units in organizations (Keaveney 2008). The prototype of salespeople, in particular, is perpetuated in society and culture in the United States (Hartman 2006). Studies have shown that consumers can have the salesperson stereotype activated in their social interactions as others act like the culturally accepted prototype

of the salesperson (Babin, Boles, and Darden 1995; Tuk et al. 2005). Similarly, a prototype might easily be stated about the marketing, operations, or engineering functions of organizations (Homburg et al. 2011; Keaveney 2008). For example, “[Marketers] are all about the hype” and “[Marketers] are too bubbly – especially at 7 a.m.” (Keaveney 2008, p 655), or “[Engineers] stifle creativity. They don’t compromise” and “[Engineers] live in a personality vacuum” (Keaveney 2008, p 656). Again, bounded cognitive capacity is central to the existence of social groups and categorical prototypes of those groups.

2. Social Group Formation Outside and Inside of Organizations

The basic human function of social group formation has been shown to begin in life as early as 18 months old. At this age, infants distinguish between people who are racially similar and dissimilar, and on average choose to play with racially similar others more than dissimilar others (Burns and Sommerville 2014). An evolutionary psychology perspective would suggest that this is engrained in us as a survival trait, that our ancestors perpetuated their bloodline, in part, through being social animals and using one another for group-based strength against danger. Being in a social group provides support to the individual both prescriptively, through norms of behavior (Hogg and Terry 2000), and descriptively, as the group validates the individual’s world view (Solomon, Greenberg, and Pyszczynski 1991). This support is a motivating force for individuals to seek out group membership, and protect both their membership in the group and the viability of the group from salient out-groups.

This discussion implies that group membership formation occurs for only socially important reasons, which is not the case. A substantial stream of research, and the very basis for much of what is known about intergroup bias, provided evidence to the contrary (Tajfel 1970;

Tajfel et al. 1971; Tajfel 1978). Individual participants in minimal group studies are told that there are others in the same experiment as them: Some who share an arbitrary similarity with them, and some who do not. For example, participants in one study were asked to make a very quick estimation of the number of dots on a screen. The dots were flashed before them quickly, so no self-assessment could have been made. The participants were then told that they either belonged to the group that inherently underestimated the number, or overestimated the number. In order to ensure the arbitrary nature of this grouping, the participants were assured that neither group was more accurate than the other. In reality, the experimenters randomly assigned people to either group, regardless of the estimate (Tajfel 1970). In this and subsequent minimal group paradigm studies, the mere perception of in-group and out-group others prompted the social group formation necessary for intergroup bias. Creating groups in this arbitrary way led to intergroup bias in these studies, which is consistent with naturally occurring group formations.

This intergroup bias was exhibited in one fundamental way in the minimal group paradigm. Following the arbitrary group assignments, participants were given the opportunity to allocate points or awards to either two members of the in-group, two members of the out-group, or one member from each group. The point allocations were accomplished through the use of a series of matrixes that constrained how much could be given to one or the other group member. In the distribution to two in-group or two-outgroup members, no favoritism for either was exhibited. However, favoritism in reward allocation was shown when it was an in-group versus and out-group member being rewarded (Tajfel 1970). Based on these replicated results, we find evidence that the mere existence of group formation can spawn in-group and out-group distinctions that are necessary for intergroup bias formation (Tajfel and Turner 1979).

The subtleties of group formation have been largely overlooked in business literature, perhaps because companies tend to be structured so that group membership is dictated to workers. Employees in ideographic organizations, or organizations with functionally-based corporate structures, are typically hired and promoted based on expertise and function-specific objectives. To the contrary, holographic organizations are exceptions to this trend, wherein employees buy-in to a common and collective vision and operate as though the entire organization is their in-group (Albert and Whetten 1985). Holographic organizations are the exception, although attempts to foster a common and collective identification with the organization are not uncommon. This dissertation specifies that the ideographic organization is a necessary axiom of the model of interfunctional bias, as functional group formation is essential to the existence of interfunctional bias.

Other group formation is possible within organizations, such as between the employees of a particular product set (Hennessy and West 1999), between the sales function and the company headquarters (Homburg et al. 2011; Wieseke et al. 2012), or between the exporting function and the rest of the organization (Cadogan et al. 2005). The setup of these studies highlights a challenge with examining interfunctional bias, the selection of the salient out-group to the examined in-group. For the sales and exporting studies cited, the out-group did not reflect a specific other function, but those with whom the function under study interacted. One contribution of this dissertation is the empirical examination of intergroup bias between dyads of functions rather than a broader set of employees.

One's function is an established starting point for identification and bias research (Fisher, Maltz, and Jaworski 1997; Keaveney 2008). What a person does as his or her profession is often a substantial part of who they are (Thatcher, Doucet, and Tuncel 2003). "Thus, occupations

serve as major identity badges for situating individuals in the organization, and occupational incumbents frequently define themselves in terms of their occupation” (Ashforth, Harrison, and Corley 2008). This is evident when someone introduces themselves as a physician, an auto mechanic, or a carpenter. For example, when an employee says that they are “a purchaser who works at Boeing,” rather than “a Boeing employee in the purchasing department,” the functional group identity of that employee appears more salient than does their collective organizational identity. With well-established function-based groups, organizations hold a high potential for the existence of interfunctional bias.

3. The Need for and Source of Positive Social Identity

Social identity theory posits that individuals tend to avoid association with groups that have low social regard, are not esteemed by others, or are seen by others in a negative light. Subsequently, we each seek identification with socially elevating groups or we seek to elevate existing in-groups (Tajfel and Turner 1979). This desire to be positively identified by others is termed positive social identity (Hewstone, Rubin, and Willis 2002) and is the motivation behind intergroup bias. Specifically, individuals seek and attain positive social identity through in-group assimilation and preference-giving, and out-group differentiation and derogation.

Positive social identity has been added to or altered in other theories of the motivators of intergroup bias. For example, optimal distinctiveness theory suggests that in addition to seeking positive social identity, we seek intergroup differentiation, and that bias is motivated by both motives (Brewer 1991; Hewstone, Rubin, and Willis 2002). On the other hand, Hogg and Abrams (1993) proposed that intergroup bias is motivated by the need to reduce subjective uncertainty. As we identify with an in-group our social uncertainty is reduced through

“normative prescriptions for behavior” (Hewstone, Rubin, and Willis 2002). Terror management theory has also been used in intergroup bias studies, proposing that group evaluations occur as one’s worldview is threatened (Solomon, Greenberg, and Pyszczynski 1991). Commensurate with this, several studies have shown that reminding participants of their own mortality will elicit greater intergroup bias (Florian and Mikulincer 1998; Harmon-Jones et al. 1996). Finally, social dominance theory proposes that intergroup bias is motivated by an innate desire to rise to the top of a social ladder (Sidanius and Pratto 2001).

To know whether intergroup bias is motivated by a need to reduce uncertainty, sustain our worldview in the face of mortality, or acquire social domination is beyond the scope of this dissertation. The term “positive social identity” captures the core essence of these concepts. Those who obtain positive social identity can have greater certainty through social support. Positive social identity is also socially reinforcing, both mentally and emotionally. Therefore, the underlying explanation for the existence of interfunctional bias is *positive social identity*. This is consistent with Stangor (2009): “Indeed social identity is a — perhaps *the* — fundamental underlying motivation behind prejudice and discrimination” (p 3).

The need for in-group support through worldview reinforcement and social norms prescriptions also applies in interfunctional contexts. As the need for positive social identity draws individuals together into distinguishable groups, those who are not in the group are consciously or non-consciously held in inferior regard (Blair and Banaji 1996). It is this underlying motivation for positive social identity that leads to the existence of intergroup bias. In interfunctional bias, positive social identity is proposed to work the same way. The functional groups are, however, groups to which employees are assigned rather than groups with social capital or positive standing that employees would choose to join. Functional identification is the

primary antecedent in the model of interfunctional bias for this very reason: Employees may form groups that cross over the functional group boundaries from which they can elicit positive social identity. To the extent that employees have high functional identification and seek positive social identity through this group membership, strongly held negative interfunctional stereotypes should exist.

Although early organizational research acknowledged the key role of positive social identity in interfunctional relationships (Brown et al. 1986; Brown and Williams 1984), recent work has only briefly mentioned or assumed it (See: Hennessy and West 1999; Sethi 2000, respectively). This dissertation goes to a greater depth than this by also examining several moderators of the relationship between functional identification and interfunctional bias.

4. The Three Domains of Interfunctional Bias: Stereotyping, Prejudice, and Discrimination

Like intergroup bias, interfunctional bias is comprised of interfunctional stereotyping, prejudice, and discrimination (Mackie and Smith 1998; Wilder and Simon 2001). Stereotyping and prejudice are considered in this dissertation as the bias that exists within one's conscious or subconscious processing, and discrimination is the biased behavior exhibited due to biased internal processing. Stereotypes and prejudice are related, to the extent that the "stereotypes represent the cognitive component of prejudice" (Dovidio et al. 1996, p 283). Likewise, prejudicial attitude formation is directly related to behaviors regarding the person, object, or issue that attitude is about (Petty and Cacioppo 1996).

The Phenomenon of Stereotyping and Interfunctional Stereotypes

Stereotypes have been defined as generalized beliefs about the characteristics, attributes, and behaviors of out-group members (Hilton and Von Hippel 1996; Wieseke et al. 2012). While this is a broad definition of stereotypes, the definitional history of stereotypes provides some insight into the difficulties of defining stereotypes more narrowly. Definitions of stereotypes prior to 1975 were accused of being inconsistent (Stangor and Lange 1994). For example, Allport (1954) defined a stereotype as “an exaggerated belief associated with a category. Its function is to justify (rationalize) our conduct in relation to that category.” (p 191). The use of exaggerated beliefs in this definition highlights the inaccuracy of stereotypes. Another example of a pre-1975 stereotype definition is: “a generalization made about an ethnic group, concerning a trait attribution, which is considered to be unjustified by an observer” (Brigham 1971 p 31). This definition is more specific than others about the topic of the stereotype and the need for an observer to evaluate whether the trait attribution is justified or not. Being unjustified also has a negative connotation, beyond simple inaccuracy. A final example of early stereotype definitions come from a psychology dictionary written by English and English (1958): “a relatively rigid and oversimplified or biased perception or conception of an aspect of reality, especially of persons or social groups” (p 523). In this definition stereotypes are specified as inaccurate due to simplification, and enduring in cognition. While each of these seems to cover some aspect of stereotyping, they are inconsistent in their specifics, and later definitions of stereotyping remedy this problem.

The requirements of *inaccuracy*, *negativity*, and *overgeneralization* are each used in conjunction with stereotypes in these early definitions, although none are requisite for a particular belief to be a stereotype (Stangor 2009). While there is a correlation between

perception and reality (Swim 1994), studies of the accuracy of stereotypes have been inconclusive (McCauley, Jussim, and Lee 1995). Stereotypes held of group members can be accurate, given the conformity of group members to the prototype of the group. Also, stereotypes do tend to be negative, although positive stereotypes also exist (Stangor 2009). With these inconsistencies noted, some more recent definitions of stereotyping are noteworthy.

We see in the following definitions, a progression toward the use of cognitive structures in defining stereotypes. First, Hamilton (1980) suggested that stereotypes are “a set of expectations held by the perceiver regarding members of a social group” (p 65). This is consistent with the use of categorizing and prototyping in the way cognitive structures are conceptualized. As members of other groups are perceived and categorized, their characteristics, attributes, and behaviors are expected to fit the prototype of the category to which they have been perceived. Similarly, citing Stanger and Lange (1994), Amodio (2013) defined stereotypes as “cognitive structures stored in memory that represent attributes associated with a social group” (p 12). In these definitions there is consistency, informing the definition being used in this dissertation. Again, stereotypes are defined as generalized beliefs about the characteristics, attributes, and behaviors of out-group members (Hilton and Von Hippel 1996; Wieseke et al. 2012).

The phenomenon of stereotyping has been broadly applied in business and in marketing, from consumer beliefs about brands, such as country of origin effects (Liu, Johnson, and Johnson 2005), to the stereotype threat of organizational personnel due to racial or minority profiling (Nguyen and Ryan 2008). However, interfunctional stereotypes have received considerably less attention in the literature and have only recently been considered. Interfunctional stereotypes are generalized beliefs about members of a specific function based on their membership in that

function. For example, upon meeting an engineer for the first time, beliefs about that engineer will automatically form based on currently held beliefs about engineers.

Two recent studies examined the effects of salespeople's negative headquarter stereotypes (Homburg et al. 2011; Wieseke et al. 2012). Wieseke et al. found that salespeople's strongly held stereotypes about the employees at the corporate headquarters were related to decreased sales performance and customer satisfaction (Wieseke et al. 2012). Homburg et al. (2011) likewise found relationships between negative headquarter stereotypes and corporate management's organizational support, employee orientation, and charismatic leadership. The examination of bias in these studies was restricted to the beliefs that salespeople held about the personnel at their corporate headquarters, but did not advance the literature about how interfunctional stereotypes are formed or how the relationships between stereotyping and performance outcomes might be moderated.

Another noteworthy study sought to explore the attributions that marketing and engineers made about why their two functions experienced conflict (Keaveney 2008). Using qualitative methods, the researcher collected data by asking marketers and engineers to elaborate on the reasons for conflict between the two groups. The result of this is a clear example of the stereotyping beliefs held between the two functions in this sample. Engineers attributed the conflict to the marketing out-group, and marketers did the same toward engineers. Their in-vivo texts directly exemplified the stereotypes each held for the other group. For example, the engineers in this study expressed beliefs that marketers "are too bubbly," that they "need 20 meetings to decide on the next meeting," or that "they don't know what they are talking about" when it comes to the product (Keaveney 2008, p 655). These interfunctional stereotypes were attributed as the source of interfunctional conflict, but were not pursued empirically in further

investigations. We see in these previous studies that stereotyping is pervasive and that these stereotypes can be held both negatively and strongly between functional units within an organization.

General Negative Attitudes and Interfunctional Prejudice

Definitions of prejudice have historically been more consistent than the definitions of stereotypes (Stangor 2009). Prejudice is fundamentally attitudinal. An attitude is a general “positive or negative feeling about some person, object, or issue” (Petty and Cacioppo 1996, p 7). In the case of intergroup prejudice, research has historically focused on the negative attitudes associate with racism, sexism and ageism. However, there is an ongoing debate in the literature regarding the valence of prejudice and whether positive evaluations about a salient out-group, that are nonetheless less positive than in-group evaluations, can be considered prejudicial (Stangor 2009). With the debate still unanswered, prejudice will be defined here in the traditional sense, as “negative evaluations of members of out-groups” (Stangor 2009, p 3; See also Dovidio et al. 1996).

Prejudicial attitudes toward the out-group are held independent from attitudes held toward the in-group (Brewer and Silver 1978). Brewer (1999) further suggested that in-group favoritism does not imply a negatively held prejudice toward an out-group. However, this is a more broad concept of prejudice than is typically found in the literature, as most studies of prejudice are interested the negative effects of prejudice (Stangor 2009). As with interfunctional stereotypes, interfunctional prejudices exist in internal processing, as the attitudes held toward another function (Sethi 2000).

Biased Behavior and Interfunctional Discrimination

“Discrimination is considered the behavioral component of prejudice” (Levy and Hughes 2009, p 25) and is largely constrained in the literature to the social concerns of sexism, racism, and ageism. Allport (1954) refers to discrimination as “acting out prejudice” (p 14) or an “[in]equality of treatment” (p 51), and suggests that this acting out varies in degrees of negative action, including: antilocution, avoidance, discrimination, physical attack, and extermination (p 14-15). Each of these behaviors is evidence of bias, although the latter two are very extreme in their damaging severity and are not expected behaviors of interfunctional discrimination. Instead, antilocution, avoidance, and discrimination are adapted as the extent of interfunctionally biased behavior that can be expected, which will be included in this dissertation as simply: Discrimination.

Antilocution refers to the free expression of intergroup antagonism with like-minded acquaintances (Allport 1954). In other words, the conversations that in-group members have about the out-group, of a derogatory manner and based on prejudices, are noted here as examples of discriminating behavior. Avoidance refers to maintaining a distance from the out-group and its members. This is commonly exhibited between functional units as an unwillingness to share information (Fisher, Maltz, and Jaworski 1997). Although antilocution and avoidance are largely hidden to the out-group, they have negative impacts to business operations that rely on cooperation between functions. For this reason, discrimination includes acting out prejudice through antilocution, avoidance, or detrimental treatment.

Two Approaches to Interfunctional Bias Research

The extant marketing literature on interfunctional bias positions functional identification as the antecedent of interfunctional stereotyping. The literature in the discipline of social psychology is not so restrictive, and recognizes several other variables that may have a direct influence on interfunctional stereotyping. Therefore, competing models of interfunctional bias will be hypothesized and a critical test of theory will be conducted in study 1.

The Functional Identification Antecedent

Identification with a groups of people can be a primary source of social influence and motivation (Brewer and Gardner 1996). Social identity theory suggests that we are naturally motivated to maintain positive identity and distain negative identity (Tajfel and Turner 1979). Even more basic than this, we are motivated to figure out who we are socially (Brewer 1991) and seek belonging with others (Baumeister and Leary 1995). Indeed, seeking identity *socially* is a “fundamental human motivation. In other words, individuals seek to define themselves in terms of their immersion in relationships with others and with larger collectives and derive much of their self-evaluation from such social identities” (Brewer and Gardner 1996 p 83). Coupling this motivation with the need for positive social identity, we can begin to see why intergroup bias exists as a general, naturally occurring phenomenon.

Current work on social identity draws a distinction between personal identity and collective identity. Personal identity is the individually held unique characteristic or combination of characteristics of the self. On the other hand, collective identity is category membership that is used in self-defining (Brewer and Gardner 1996). In other words, as people categorize themselves as belonging to one social group or another, and these self-categorizations

make up a part of who they are, this is collective identity (Ashmore, Deaux, and McLaughlin-Volpe 2004). Collective identification, then, is the extent to which individuals hold self-definition based on social categorization. Religious affiliation, club membership, and professional groups are each examples of groups with which individuals may identify and find identification. Interpersonal identity is another identity distinction that should be acknowledged, but which does not relate to intergroup identities. This form of identity suggests that we can find identification as a parent or child, where the social referent is a single other person (Brewer and Gardner 1996). Interpersonal identity fits somewhere between personal and collective identity, but like personal identity, it does not apply to this intergroup-based research. Therefore, this dissertation utilizes the current understanding of collective identity and identification.

Companies in which employees take on identities based on different functional units are known as ideographic organizations, or organizations in the ideographic form (Albert and Whetten 1985). The ideographic organization is a necessary context for the existence of interfunctional bias, as group distinctions between functions are needed to establish and reinforce functional-level identification and out-group beliefs and attitudes (Hennessy and West 1999). The interest in this dissertation, then, is in the typical organization, which does not foster a collective organizational identity, and as a result, identity and identification at subunit levels of the organization form (Albert and Whetten 1985). Most often subunits within the organization form groups based on their functional goals and incentives, and operate as differentiated categories toward other subunits in the organization. This *economic conflict system* or *coalition of subunits* within the firm results in resource and power struggles, and may cause inefficiencies and ineffectiveness for the organization (Ashforth and Mael 1989; Friedkin and Simpson 1985;

March 1962). In effect, this type of multi-function organization is the basis for much of the intra-organizational research found in the marketing literature, and this research is no different.

This dissertation asserts that collective identification occurs at the functional level in organizations (Fisher, Maltz, and Jaworski 1997), and is potentially the primary antecedent of interfunctional bias (Sethi 2000). Functions in companies are traditionally split into silos through departmental organizational structures (Hall 1988). These functional distinctions lead to group formation, as employees identify with their function more than they do with the goals and norms of a superordinate identity, such as the whole organization or cross-functional group (Cadogan et al. 2005). Group identification has been previously defined as the “psychological orientation of the individual such that membership is a fundamental aspect of self-definition” (Fisher, Maltz, and Jaworski 1997). Functional identification is likewise defined here as self-definition obtained through membership of an organization-based functional group (Sethi 2000).

Two types of identification that appear in the management literature should not be confused with functional identification, as they differ in their theoretical basis and purpose. Specifically, professional and occupational identification are forms of personal identification that are related to the part employees play in the organization (Pratt, Rockmann, and Kaufmann 2006). These are more in line with the concept of role identity, which stems from identity theory rather than social identity theory. Identity theory posits that individuals act out the role that is congruent with their self-identity. Therefore, functional identification is different from professional and occupational identification, in that it does not prescribe behavior through, and is not based on roles, in an organization. Instead, functional identification occurs when individuals self-define as members of groups and consequently seek positive social identity through their

group membership. In sum, occupational and professional identities are forms of personal or individual identity, whereas functional identity is a form of social identity.

The dynamic nature of identification adds complexity to the use of identification in research. Specifically, within organizations employees may find identification through multiple identities (Wieseke et al. 2012), as “a person’s identity may be derived from organizational membership, department, function, or work group” (Houston et al. 2001). Wieseke et al. (2012) and others (Ashforth, Harrison, and Corley 2008) suggest that multiple organizational identities are “hierarchically nested, with lower-order identities embedded within higher-order identities” (p 3). Due to the nesting of these identities, they are simultaneously held by the employee (Hekman et al. 2009; Johnson et al. 2006).

Concerns about the dynamism of identification are reduced in this dissertation, as several studies of multiple organizational identities suggest that organizational members identify more strongly with lower-order identities, such as functional units, than high-order identities, such as the organizational collective (Wieseke et al. 2012). Riketta and Dick (2005) proposed three reasons why this is the case: First, functions “are the more salient social unit,” second, functions “serve employees’ needs for optimal distinctiveness,” and third, functions “are the more important instances for socialization and control” (p 504). Despite the likelihood that functional units will be employees’ prevalent identification source, organizational identification remains a potential source of identification and will be addressed.

Underlying the antecedent of functional identification is the understanding that group distinctiveness spawns intergroup bias (Ashforth, Harrison, and Corley 2008). As the minimal group paradigm suggests, the mere perception of difference between self and others tends to lead to out-group, biased behavior (Tajfel et al. 1971; Tajfel 1978). As well, Houston et al. (2001)

suggest that “people tend to identify most strongly with groups that are distinctive and prestigious and that compete with a salient set of out-groups.” Therefore, the more strongly an employee finds identification through her function, the more this function is likely to serve as a prestigious in-group that competes with and is differentiated from other functional groups.

Brewer (1991) proposed a theory of optimal distinctiveness in which she suggests that humans continually seek balance between the need for assimilation with others, with the need for distinctiveness from others. She stated that “Social identity can be viewed as a compromise between assimilation and differentiation from others, where the need for deindividuation is satisfied within in-groups, while the need for distinctiveness is met through intergroup comparisons” (Brewer 1991, p 477). These intergroup comparisons are essential for positive social identity maintenance and resulting interfunctional bias.

Empirical Support of the Functional Identification Antecedent

Studies relating functional identification to bias between organizational functions exist in the literature. In early work on the topic, Brown and Williams (1984) performed a field study using semi-structured interviews and survey questions with workers at a bread factory. Part of their procedure was to collect empirical data on the relationship between functional identification and functional unit differentiation. One instance of the relationship between interfunctional differentiation and functional identification was found. This study provided the first evidence that functional identification is positively related with interfunctional attitudes (Hennessy and West 1999).

In a similar study of workplace-based bias, functional identification was shown to relate to interfunctional prejudice between two of the functional units studied (Brown et al. 1986).

While more functional units were included in the study that did not exhibit any form of bias between them, there was no indication in this study that salience of the particular function was captured nor controlled, suggesting that the effects of functional identification on interfunctional attitudes between the other functional units may have been muted. This study provides replicated evidence to support the existence of the relationship between functional identification and interfunctional bias.

In another study, the effects of relative functional identification on interfunctional communication were examined (Fisher, Maltz, and Jaworski 1997). This study used a semantic differential scale of identification to measure functional identification strength relative to organizational identification strength. The authors found that relative functional identification is negatively related with the two-way communication between functions, or communication bi-directionality. They also found that high functional identification, relative to organizational identification, negatively moderated the relationship between information sharing norms between functions and communication bi-directionality. Finally, relative functional identification positively moderated the relationship between interfunctional integrated goals and bi-directional communication. This last finding was a surprise and contrary to the expected result. While this study used in-group favoritism as its basis, out-group derogation and stereotypes, prejudices, and discrimination were not explicitly examined, although findings were consistent with interfunctional discrimination.

Hennessey and West (1999) replicated work on social identity theory in a medical care organization. Their study of group favoritism between specialties in a health care organization confirmed the existence of intergroup bias between these units. Specifically, evaluative ingroup favoritism was shown to be related with work group identification, when controlling for

organizational identification and perceived competition. However, the attempt to detect a relationship between these independent variables and a behavioral dimension of bias was not successful. This study provides an adequate basis upon which to propose that the experimental procedures of Tajfel (Tajfel 1970) can be reasonably applied to organizational group settings. In addition, functional identification was shown to relate positively with one aspect of intergroup bias (i.e., favoritism reflecting a biased behavior).

Cadogan et al. (2005) performed a path analysis that tested hypotheses related to the conflict and connectedness between the export function and other functions in the organization. Relative export functional identification was a strongly supported antecedent of increased conflict and reduced connectedness in this study. The authors cited prior work by Zinkhan and Zinkan (1997) in their hypothesis justification, suggesting that functional silos and their segregation “by vocabulary and discipline and training” (p 4) were the cause of the observed conflict. Differing world views were also cited as justification for their hypotheses (Fisher, Maltz, and Jaworski 1997). The group distinctiveness found in this study is an indication that interfunctional bias may be the underlying cause and potential mediator of the relationship between functional identification and interfunctional conflict.

In another study that approaches interfunctional bias, the concept of a superordinate identification was shown to foster cooperation in cross-functional teams (Sethi 2000). Superordinate identification can relieve intergroup bias by making salient a larger group with which the in-group and out-group are each a part (Ashforth and Mael 1989). In companies, organizational identification often used as the superordinate identification, can bring disparately allied employees together under a common identity (Ashforth, Harrison, and Corley 2008). Sethi, specifically, used superordinate identification as a way to reduce interfunctional bias:

“Strong functional identities of individuals in the firm give rise to interfunctional biases and stereotypes” (p 332). Sethi further elaborated by stating that “preference for the orientation of one’s own functional area over others’ creates and sustains interfunctional bias and stereotypes” (p 332). While the remedy for interfunctional bias was the focus of this research, the behavioral, attitudinal, and behavioral domains of interfunctional bias were not examined.

The gateway of interfunctional bias is the cognitive component or generalized beliefs about the out-group that the in-group member accepts as true. The literature on prejudice and attitude formation suggests that stereotyping beliefs have both strength and valence dimensions (Dovidio et al. 1996). Strongly held stereotypes are an indication of greater bias, though they may be dampened by the neutrality of the valence of the belief. Thus, the more strongly held and negative the belief, the greater the potential for interfunctional bias (i.e. prejudicial attitudes, see also Fishbein (1963)). Although forming positive beliefs about out-group members is possible, given the discussion on the need for positive social identity as the primary motivator of interfunctional bias, this research will be concerned only with the negative beliefs about out-group members. Based on the theoretical basis and empirical support for the proposed relationship between functional identification and interfunctional bias, the first hypothesis of this dissertation is presented as follows:

H1: Functional identification is expected to be positively related with interfunctional stereotyping strength (e.g. strongly-held, negative interfunctional beliefs).

Competing Hypotheses of the Antecedents of Interfunctional Stereotyping Strength

Model A positions functional identification as the sole antecedent of interfunctional stereotyping strength, with two individual differences moderators and four condition of contact

moderators. In contrast, the six moderating variables from model A are hypothesized in model B to have direct, main effects on interfunctional stereotyping strength. A review of these six variables is needed to justify the competing models and critical test of theory.

Individual-Difference Moderators

The relationship between functional identification and interfunctional stereotyping strength is likely to be highly influenced by differences between individual employees. These differences include the existence of an individual's collective identification that could supplant the salience of functional identification, and the personality trait of negative affect. An examination of each will follow.

Organizational Identification

First, organizational identification is arguably the most important moderator to include in a study of functional identification. Social identity theory states that people have the need to self-define through comparison to others and others' group membership. Humans seek positive social identity through establishing "positively valued distinctiveness for their own group compared to other groups (Turner and Reynolds 2001)." However, individuals construe contextually-dependent self-definitions and take on many identities (Brewer and Gardner 1996). Dual social identity occurs as a given context calls for more than one identity to be salient. The dual identity conflict exists in the organization as members of functional units identify with both the organization and their functional unit simultaneously (Fiol, Pratt, and O'Connor 2009). In other words, those who have high functional identification may, at the same time, have high organizational identification. Model B is consistent with this perspective, that functional and

organizational identification can be independent from one another, and that their influence on interfunctional stereotyping strength should be considered separately.

Contrary to this, organizational identification has been used alongside of functional identification as a construct of relative functional identification (Cadogan et al. 2005; Fisher, Maltz, and Jaworski 1997). Unfortunately, this use of functional and organizational identification prevents the analysis of their independent absolute values. This dissertation is positioned to examine functional identification independent from organizational identification, and instead considers not only the moderating effect of organizational identification on the relationship between functional identification and stereotyping strength, but also its direct main effect. Model A's hypothesized interaction between functional and organizational identification is also consistent with recent work on functional identification (Wieseke et al. 2012).

Organizational identification is to derive some portion of self-definition from the organization, while functional identification is to self-define with the subunit functional group (Albert and Whetten 1985; Sethi 2000). Organizational identification, as a superordinate identity, allows peoples of disparate functional, cultural, racial or other bases of groups to assimilate under a shared identity. Under this theoretical basis, organizational identification has been shown to have substantially positive effects on firms, including: increased organizational satisfaction, improved organizational extra-role behavior, and decreased employee intent to leave (Abrams, Ando, and Hinkle 1998). For a review and meta-analysis on organizational identification see Riketta and Dick (2005).

The expected effect of organizational identification on interfunctional stereotyping strength is further informed by the literature on the bias-reducing effects of superordinate identification (Paluck and Green 2009). Having a salient superordinate identity has been shown

as a way to discourage function-promoting behavior in cross-functional teams (Sethi 2000). In other words, “superordinate identity is a group-level concept that captures the extent to which team-based identity overrides the functional identities of members” (Sethi, Smith, and Park 2001). In model A, this overriding influence of superordinate identity is expected to also override the direct effects of functional identification on interfunctional stereotype strength and negativity. Specifically, this is due to the different source of positive social identity when organizational identification is high. Identification with the organization frames the organization as the in-group for the individual, and extra-organizational groups as out-groups. Thus, out-group derogation and intergroup bias forms inter-organizationally rather than inter-functionally.

H2a (Model A): Organizational identification is expected to moderate the relationship between functional identification and interfunctional stereotyping strength, such that when an individual’s organizational identification is low, the relationship will be strengthened; when an individual’s organizational identification is high, it is expected that that the relationship will be weakened.

A superordinate identification such as organizational identification is alternatively expected to be related with reduced interfunctional bias regardless of the level of functional identification present (Hornsey and Hogg 2000; Sethi 2000). Employees who strongly identify with in-groups besides their functional workgroup, or who identify with multiple groups may still obtain positive social identity through outgroup derogation targeted at members of an out-group function. Thus, a direct relationship is hypothesized between organizational identification and interfunctional stereotyping strength in model B.

H2b (Model B): Organizational identification is positively related with interfunctional stereotyping strength.

Trait Negative Affect

As discussed previously, intergroup, and indeed interfunctional bias is motivated by a need for positive social identity. The need for positive social identity varies from person to person, suggesting that a personality trait may directly influence interfunctional bias, or moderate the relationship between functional identification and interfunctional bias. Research on downward comparison, or the act of obtaining positive social identity, suggests that those with low self-esteem exhibit higher levels of social comparison (Wills 1981). Crocker et al. (1987) also found that those who were low in self-esteem “responded to threats to the self-concept by engaging in more self-enhancing comparisons between ingroups and outgroups” (p. 914). Self-esteem, or the extent of negativity that one holds of his or her self, is related with intergroup bias. Classic personality trait measures of neuroticism or emotional stability are related with self-esteem (Robins et al. 2001), and are prime candidates for relating with the need for positive social identity. A more current personality trait known as negative affect (NA) is preferred over neuroticism in the business literature.

As a trait, rather than a state, NA captures the extent to which individuals tend to negatively emote. Thus, views of selves and others are more likely to be negative, and the propensity to seek positive social identity is higher for those with high trait NA. Put another way, those high in NA “dwell on the negative side of themselves and the world” (Watson and Clark, 1984, p. 465). NE is not, however limited to influencing self-esteem and social comparisons, it “subsumes a broad range of negative mood states, including fear, anxiety, hostility, scorn, and disgust” (Watson et al., 1988, p. 347). In the business literature NA has been shown to negatively moderate the relationship between occupational embeddedness and job performance (Ng and Feldman, 2009).

In model A, trait NA is expected to positively moderate the relationship between functional identification and stereotyping strength. However, model B acknowledges that functional identification may not be necessary for trait NA to positively relate with interfunctional stereotyping strength, as NA is the tendency to have negative emotions in general (Watson and Clark 1984).

H3a (Model A): Trait negative affect is expected to moderate the relationship between functional identification and interfunctional stereotyping strength, such that when an individual is high in negative affect, the relationship will be strengthened; when an individual is low in negative affect, it is expected that that the relationship will be weakened.

H3b (Model B): Trait negative affect is positively related with interfunctional stereotyping strength.

Interfunctional Contact and Conditions of Prejudice Reduction

A lack of contact with out-groups has long been suspected as a cause of prejudice, given supporting evidence from the days of segregation in America (Allport 1954). Without sufficient knowledge of out-group members, prototypes of the social category dominate the working image of the out-group (Stephan and Stephan 1984). This can result in an assumed dissimilarity between the groups, whether or not such dissimilarities actually exist (Byrne and Wong 1964). In one study, participants randomly assigned to groups predicted that their beliefs were congruent with others in their group, and not congruent with members of the randomly assigned out-group (Wilder and Allen 1978). This suggests that “categorization alone leads to assumed dissimilarity” (Stephan and Stephan 1984, p 240). What this minimal-group type of experiment

also indicates is that these assumptions of dissimilarity are the default manner of thinking about out-groups with which there has been no contact.

The contact hypothesis originated with the seminal work of Allport (1954). This hypothesis proposes that “intergroup contact under *certain prerequisite conditions* promotes the development of more harmonious intergroup relations” (Gaertner et al. 1994). In other words, contact alone does not reduce intergroup bias, but contact under certain conditions may (Dovidio, Gaertner, and Validzic 1998). These conditions have been developed and refined over the past half-century, in different contexts and to varying degrees (Pettigrew 1998).

The originating work for these contact conditions is Allport’s (1954) taxonomy of relevant factors, in which he proposed 6 domains of contact circumstances, upon which future work on the prerequisite conditions are based. These domains include “quantitative aspects of contact” (i.e. frequency, duration, number of persons involved, and variety), “status aspects of contact,” “role aspects of contact,” “social atmosphere surrounding the contact,” “personality of the individual experiencing the contact,” and “areas of contact” (i.e. casual vs. occupational vs. religious) (Allport 1954, p 262-263). These conditions of contact were thought by Allport to be the variables that researchers should study in the pursuit of reducing and eliminating prejudice. At that time, however, “scientific knowledge [was] not available on *all* the variables” and Allport commented that this list is not exhaustive (Allport 1954, p 263).

Researchers have since examined the validity of many of these variables alone and in combination, and have sought parsimony in the contact hypothesis through the testing of contact conditions. Cited as one of “the most comprehensive reviews of the contact literature” (Hewstone and Brown 1986, p 6), Amir (Amir 1969) examined the studies up to that date and compiled the favorable and unfavorable conditions for increasing and reducing prejudice,

respectively. Favorable, prejudice-reducing conditions include equal status contact, contact between majority and higher status minorities, authoritarian support or positive social climate, intimate versus casual contact, pleasant or rewarding contact, existence of a superordinate goal or functional activity. Unfavorable, prejudice strengthening conditions include intergroup competition, unpleasant or tension-laden contact, unequal status or prestige, group member frustration, objectionable intergroup standards, and lower status minority contact with majority groups. This compilation and assessment of the empirical work on the contact hypotheses, to that date, became the basis on which many of the studies on the contact hypothesis are based (Hewstone and Brown 1986).

Cook (1978), another prominent researcher in this area, further abridged the conditions of contact and focused on the five most prominent conditions under which he proposed pejorative outgroup attitudes would improve. These include the following:

1. Circumstances define the status of the participants from the two social groups as equal in the situation in which the contact occurs.
2. The attributes of the disliked group members with whom the contact occurs are such as to disconfirm the prevailing stereotyped beliefs about them.
3. The contact situation encourages, or perhaps requires, a mutually interdependent relationship.
4. The contact situation has high acquaintance potential.
5. The social norms of the contact situation favor group equality and equalitarian intergroup association.

Cook (Cook 1978) found that contact under these conditions led to reduced prejudice between racially differing groups of participants. Following this study, the testing of the conditions of contact narrowed to these key conditions, with some license taken for other considerations.

Ben-Ari and Amir (1986) reported the use of five contact conditions, replicating the four of the five used by Cook, removing the disconfirming attributes (e.g. content of the contact) condition, and adding that “the initial intergroup attitudes are not extremely negative” (p 51). Gaertner et al. (1994) also presented a variation on this list, maintaining the four common conditions in the two studies above. Although other variations of the contact conditions have since been used (Pettigrew 1998), those used by Gaertner provide a parsimonious synthesis of the dimensions of contact necessary for reducing bias between social groups. Likewise, these conditions are consistent with the corporate environment in which functional units operates, and with the literature on interfunctional cooperation (Hung and Lin 2013).

Although studies of intergroup bias had thus far examined the contact conditions, theoretical development of the phenomenon was lacking. Being one of the first to apply a theoretical base to the contact hypothesis, Gaertner et al. (1994) examined the common ingroup identity model as the theoretical basis for the effectiveness of the contact conditions. The common ingroup identity model is based on the theories of social identity and self-categorization, and proposes that contact “transform[s] members’ cognitive representations of the memberships from separate groups to one, more inclusive group” (Gaertner et al. 1994, p 226). Specifically, “equal status, cooperative interaction, interpersonal interaction, and supportive norms reduce bias because they alter member’s cognitive representations of the memberships from ‘us’ and ‘them’ to a more inclusive ‘we’” (Gaertner et al. 1994, p 226; See also Brown and Turner 1981; Worchel et al. 1978). Much like the effects of organizational

identification, the contact conditions can be effective in breaking down group-level barriers. The specific domains of the contact construct are equal status, interpersonal interaction, functional interdependence, and supportive norms.

Equal Status

Equal status in the contact construct historically referred to the socio-economic or educational status of the individuals in the groups under study. One reason for this is that these were the relevant factors in the study of race and ethnic-based studies of prejudice and segregation. As Amir (1969) reported on a study by (Mannheimer and Williams 1949): “factors which were *relevant* to the specific contact situation... determined whether change would take place” (p 324). Within companies, functional units can experience differences in equality as resources, incentives, and operating emphases are placed in favor of one function over another. This can be the result of a cultural tradition or the educational emphasis of the top management team. Regardless of its source, the inequality of functions within an organization are expected to be influential in interfunctional bias. As the corporate climate is perceived as unequal, the need for positive social identity will be amplified and increasingly sought through outgroup derogation.

Interpersonal Interaction

Interpersonal interaction, as cited from Gaertner et al (Gaertner et al. 1994) is an adaptation of the condition reviewed by Amir (Amir 1969) termed “casual versus intimate contact” (p 330). The need for “quite close personal relationships” (Cook 1957, p 3), as a condition of contact, had received substantial empirical support up to that time (Segal 1965;

Yarrow, Campbell, and Yarrow 1958). However, one damning argument that Amir (Amir 1969) made in support of the need for interpersonal or intimate interaction was work situations. Relating a failed workplace contact study to the need for interpersonal interaction (Harding and Hogrefe 1952), Amir suggested that “the equal status respondents seemed to have simply accommodated to the situation in which they found themselves” (p 332). However, the modern workplace is arguably more of a source of interpersonal relationships than workplaces historically, and so variance in the intimacy of interactions in today’s workplace is expected. Anticipating variance on this contact condition, this review suggests that interpersonal interaction should be influential in the examination of interfunctional bias.

Cooperative Interdependence

Cooperative interdependence is synonymous with competition and cooperation between the functional units (Amir 1969). In several studies on foreign travel, contact involving participation or cooperation was shown to foster greater positive intergroup relationships than did contact without cooperation (Schild 1962; Selltitz and Cook 1962). Cooperation between groups can also be thought of as superordinate goals, which have been found to encourage cooperative behaviors between groups (Sherif 1967). In the absence of superordinate goals in contact situations, several contact studies reported an increase in antagonism between two groups (Dodd 1935; Ram and Murphy 1952). Cooperative interdependence is thus an essential condition for meaningful intergroup contact (Gaertner et al. 1994).

Within firms, competition and cooperation have been studied separately (Maltz and Kohli 2000) and together (Bengtsson and Kock 2000), and in marketing in the contexts of cross-functional integration (Esper et al. 2010), new product development (Griffin and Hauser 1996),

and information sharing (Luo, Slotegraaf, and Pan 2006; Maltz and Kohli 1996). Kahn and Mentzer (1998) found that collaboration between both marketing and manufacturing, and between marketing and “R&D” is positively related with departmental and company performance. This study also found that “interaction alone does not appear to have a direct effect on performance success” (Kahn and Mentzer 1998, p 59), suggesting the need for contact conditions, such as cooperative interdependence.

Supportive Norms of the Organization

The supportive norms reviewed by Amir (1969) included those authoritative, atmospheric, or institutional elements of the environment that reinforce intergroup contact. The supportive norms of the organization may likewise come from the authoritative elements, or more accurately, the management team. Likewise, the structure and culture of the organization play normative roles related to intergroup contact. The decentralized or silo-based structure in organizations inherently discourages interfunctional interaction and contact. Conversely, organizations that have instituted cross-functional teams tend to experience a greater degree of interfunctional contact. Organizational culture may also set up barriers to interfunctional contact if norms suggest that functional units are not to intermingle. This domain of the contact construct, more than the others, is ultimately concerned with normative barriers to interfunctional contact.

Each of these four conditions of contact maintains the same directionality with their influence on stereotyping strength, either directly or interacting with functional identification. For model A, in keeping with the theoretical basis that functional identification is the sole antecedent of interfunctional stereotyping strength, these conditions of contact are hypothesized

to attenuate the relationship between functional identification and interfunctional stereotyping strength. As functional identification contributes to employees' propensity to seek positive social identity from employees of other functions through stereotyping, equal status, interpersonal interaction, cooperative interdependence, and supportive norms should each attenuate this relationship.

H4a (Model A): Contact is expected to moderate the relationship between functional identification and interfunctional stereotyping strength, such that when equal status (H4a1), interpersonal interaction (H4a2), interdependence (H4a3), and supportive norms (H4a4) are low in the aggregate, the relationship will be strengthened; when these dimensions of the contact construct are high, it is expected that that the relationship will be weakened.

The treatment of the conditions of contact in model B is based on the direct effect that each of the conditions are shown to have in the psychology literature (Ben-Ari and Amir 1986; Gaertner, Dovidio, and Bachman 1996). In simple terms, employees may seek positive social identity from other functional groups regardless of their identification with their on functional unit, depending. Based on this, the direct main effect of these conditions on interfunctional stereotyping strength is hypothesized.

H4b (Model B): Contact in the form of equal status (H4b1), interpersonal interaction (H4b2), cooperative interdependence (H4b3), and supportive norms (H4b4), is positively related with interfunctional stereotyping strength.

It is important to note that in both Models in Figures 1 and 2, these hypothesized are bundled under H4a and H4b.

The Relationships between Interfunctional Stereotyping, Prejudice, and Discrimination

The proposed model of interfunctional bias frames interfunctional prejudice as associated or highly correlated with interfunctional stereotyping strength and interfunctional discrimination. This is consistent with work by Dovidio et al. (1996) who suggest that, like other attitudes, prejudice has three components: cognitive, affective, and conative. The cognitive component is the object to which the affect and conation are attendant. In the case of interfunctional bias, the cognitive component of prejudice is the interfunctional stereotype. The affective component of interfunctional prejudice is the negative attitude held about other functional units that is associated with the corresponding interfunctional stereotypes. Finally, conation refers to the behavioral disposition of the prejudiced individual. This conceptualization of prejudice suggests that interfunctional prejudice is the focal domain of interfunctional bias. Therefore, the three of these domains are expected to exist in concert between functional units in organizations.

The Relationship between Interfunctional Stereotypes and Prejudice

Fishbein (1963) and subsequent authors (Ajzen 1985; Smith and Clark 1973) define attitudes as the “evaluative response” related to the “beliefs about any given object” (p 233). Attitude towards an action has been predicted by a combination of the potential of beliefs to lead to the action and the importance of those beliefs to the individual (e.g., Fishbein and Ajzen 1975). Indeed Dovidio and his colleagues (1996) actually operationalized prejudice employing the surrogate of the summation of the stereotype strength and the evaluation of the stereotype. This dissertation takes a different conceptual perspective in that stereotypes that are influential are operationalized through the combination of strength and valence and that this constructed variable predicts prejudicial attitudes towards the other function. To the extent that prejudice is

subsequently related with biased behavior, prejudice can be thought of as a mediating variable, or the vehicle through which beliefs lead to behavior (Doob 1967). This is the foundational basis of intergroup bias, that general beliefs about others may be evaluated negatively and cause prejudice to form (Stangor 2009). Interfunctional bias operates in the same way.

With interfunctional stereotyping strength and prejudice thus specified, the positive relationship between interfunctional stereotyping strength and prejudice is apparent. An interfunctional prejudicial attitude is based on the stereotype or collection of stereotypes one holds about the out-group and its members. In this dissertation, strongly held stereotypes which are not negative do not relate with prejudicial attitudes, due to the specified negative nature of prejudice (Stangor 2009). The hypothesized relationship is thus between interfunctional stereotyping strength and interfunctional prejudicial attitude formation.

H5: Interfunctional stereotyping strength is positively related with interfunctional prejudiced attitude formation.

The Relationship between Interfunctional Prejudice and Discrimination

Given that stereotypes and prejudices exist between functional units in firms, some degree of discrimination is also expected. Attitudes dispose the attitude holder to behavior that is consistent with the attitude (Chein 1967). This relationship is not without other influencing effects (Ajzen 1985), although the direct correlation between prejudice and discrimination has been established in the literature (Dovidio et al. 1996).

The connections between stereotypes, prejudices, and discrimination have been most clearly shown in the literature on race, age, and/or gender-based discrimination (Dovidio et al. 1996; Steele 1997; Ziegert and Hanges 2005), although the business literature has generally not

approached bias in this way, if at all. Wieseke et al. (2012) is a recent exception, as the performance outcomes of the stereotypes that salespeople hold about their headquarters include discriminatory elements. Specifically, a reduction in sales performance was hypothesized to be the result of a passive form of discrimination. Similarly, discrimination in the form of antilocution was theorized as the antecedent to reduced customer satisfaction with the sales interaction. In other words, salespeople were thought to put down or openly criticize their headquarters and reap lower customer satisfaction as a result (Wieseke et al. 2012). These examples of discrimination also support the notion that less extreme degrees of discrimination tend to exist within firms rather than more extreme degrees.

In another study on interfunctional bias in organizations, Hennessey and West (1999) performed a replication of the Tajfel (1970) social identity experiments within a healthcare organization. In this study, functional unit identification was hypothesized to relate positively with discriminatory in-group favoritism. While both functional identification and interfunctional discrimination behavior were present, they were not found to be related (Hennessy and West 1999). This suggests two possibilities. First, the relationship between identification and discrimination may be mediated by the strength of the stereotypes held and the prejudicial attitude. Second, moderating factors may exist between identity and the strength of the stereotypes held as well as between the internally processed domains of interfunctional bias (i.e., stereotyping and prejudice) and the discrimination behavioral outcome.

In a previously mentioned study, the open responses of participants of a qualitative study on the stereotypes held between marketing and engineering functions resulted in some interesting findings regarding discrimination (Keaveney 2008). In particular, the comments indicated that engineers exhibited avoidance discrimination by “deflecting the influence of the outsider-

marketers” in protection of their own functional in-group (p 658), consistent with social identity theory and the need for positive social identification.

The literature-base and empirical evidence supports the model of interfunctional bias in that interfunctional stereotype-based prejudice includes a conative or behavior dispositional component, and that interfunctional discrimination is the direct outcome of interfunctional prejudice.

H6: Interfunctional prejudicial attitudes are positively related with interfunctional discrimination, to include cooperative behaviors (A listing of these can be found in chapter 3).

The Influences of IMS and External Motivators to be Non-prejudiced

The literature on motivation to respond without prejudice grew from interest in the social psychology discipline on subtle or aversive racism (Plant and Devine 1998). The prevailing cultural norms in the United States have, over the past 65 years, come to discourage racial prejudice (Gaertner and Dovidio 1986). Given this social discouragement, researchers have observed a departure from blatant prejudice. “Subtle racism is the modern form; it is cool, distant, and indirect” (Pettigrew and Meertens 1995, p 57). The emergence of subtle racism has begged the question: Are observed reductions in overt prejudice due to prejudice reduction or due to the suppression of racism due to social pressures? Motivations of prejudice were subsequently utilized as a potential means of studying whether the individuals are motivated to avoid prejudice due to IMS (e.g. personal value system) or external motivations (e.g. social expectations) (Plant and Devine 1998). IMS and external motivators to respond without prejudice have received modest attention in the prejudice literature over the past decade (Kunstman et al. 2013).

Internal Motivation to Respond without Prejudice

One's internal motivation to respond without prejudice is based on a moral obligation or self-concept that dictates that prejudice is wrong (Dunton and Fazio 1997). Prejudice that produces guilt is known as prejudice with compunction and has been compared to cognitive dissonance in its operation (Devine et al. 1991). Cognitive dissonance occurs as an individual's behavior is not congruent with their self-concept, causing discomfort in the form of guilt or reduced self-esteem (Aronson 1968). Internal motivation to respond without prejudice, then, is based on the desire to act consistent with one's moral standards or normative beliefs, and avoid cognitive dissonance.

In studies of intergroup bias, internal motivation to respond without prejudice has been shown to relate positively with reduced discrimination and improved intergroup circumstances (Butz and Plant 2009). For example, in studies of racial prejudice, those high in internal motivation often give more attention to intergroup information, as a means of maintaining their individual standards (Chen et al. 2014; Devine et al. 2002). Internal motivation has also been shown to correlate with low levels of prejudiced beliefs, regardless of public or private contexts, and despite low external motivation to respond without prejudice (Butz and Plant 2009; Plant and Devine 1998). Finally, internal motivation to respond without prejudice has been shown to relate with lower levels of *implicit* racial bias (Amodio, Harmon-Jones, and Devine 2003), suggesting that "participants whose motivation was deeply internalized responded with low levels of automatic negativity" (Butz and Plant 2009, p 1321). This suppression of prejudice through internal motivation is expected to operate similarly in the interfunctional context. As depicted in model A, as individuals are more morally disposed to avoid judging others or generalizing based on group membership, the relationship between interfunctional stereotyping

strength and interfunctional prejudice is moderated. Model B includes a direct main effect without moderation for IMS.

H7a (Model A): One's internal motivation to respond without prejudice is expected to moderate the relationship between interfunctional stereotyping strength and interfunctional prejudice such that, when an individual's internal motivation is low, the relationship will be strengthened; when an individual's internal motivation is high, it is expected that the relationship will be weakened.

H7b (Model B): One's IMS is negatively related with interfunctional prejudice.

External Motivators to be Non-prejudiced

Examinations of the effectiveness of external motivation in reducing prejudice has produced mixed results (Devine et al. 2002; Ratcliff et al. 2006). One reason for this appears to be the contextual dependence of external motivation. "Primarily externally motivated people... are unlikely to regulate bias when responding under private conditions" (Devine et al. 2002, p 838). Thus, external motivation carries the most influence in public settings, where the threat of social judgment is prominent (Butz and Plant 2009). This form of motivation has traditionally been construed as one's drive to comply with "society's non-prejudiced values" (Plant and Devine 1998, p 812). Given the public nature of working in corporate organizations and the frequent use of external motivators (e.g. monetary incentives), the corporate organizational context should be one in which external motivators are effective.

Two external motivators to be non-prejudiced are specified in this research, based on their use by managers in corporate organizations. First, the greater the social norm to cooperate with other functions, even in the presence of interfunctional stereotypes, the less interfunctional

prejudicial attitudes should form. The examination of within-function social norms is a contribution to the literature and enables the development of managerial implications for bias reduction in interfunctional cooperation. Managers have two potential paths to influencing the norms in functional work groups. The contact conditions capture one of these, which is to make the expectation of cooperation clear to employees, thereby establishing a supervisory norm that being non-prejudiced is expected by managers. The second path to influencing social norms applied more readily to the present review, as managers may also foster positive interfunctional relationships through cultural means. This supportive norm is one in which employees influence one another through expressed compatriot expectations. In this one might ask whether or not there is an expectation within ones' in-group to be non-prejudiced. If so, this form of social norm is present.

The second external motivator to be non-prejudiced has already been mentioned. Corporate organizations are unique environments in which individuals can be incentivized to be non-prejudiced. The incentives external motivator is new to the bias literature, as incentives to respond without racial, gender, or age prejudice do not have practical implications in society-at-large and have not been approached in the literature. As with social norms, when incentives to be non-prejudiced are present in corporate organizations, interfunctional prejudiced attitudes should be reduced. However, the efficacy of external motivators depends on employees' IMS. IMS has consistently been shown to reduce prejudice, whereas external motivation has not (Butz and Plant 2009). Those high in IMS are already adequately motivated to keep their stereotyping beliefs from becoming prejudiced attitudes, so external motivators should not interact with IMS for these employees (Plant and Devine 2009). However, those low in IMS should be more influenced by external motivators to be non-prejudiced. Therefore, a three-way interaction

between stereotyping strength, IMS, and external motivation to be non-prejudiced is hypothesized.

H8: The moderating influence of employees' internal motivation to respond without prejudice on the relationship between interfunctional stereotyping strength and negative interfunctional prejudiced attitudes will be amplified in the presence of an external motivator to be non-prejudiced (i.e., incentives, social norms), such that those with low internal motivation will have a lower level of negative interfunctional prejudiced attitudes related to interfunctional stereotyping strength, in the presence of an external motivator, and internal motivation will attenuate the relationship between stereotyping strength and prejudiced attitudes regardless of the presence or absence of an external motivator to be non-prejudiced. This reflects two 3-way interactions, each of which will be described in Chapter 3.

Conclusion of Chapter 2

Thus far in this dissertation, chapter 1 proposed the need for interfunctional research in the marketing literature, introduced the phenomenon of interfunctional bias as a potential inhibitor of interfunctional cooperation, and established the research agenda. Chapter 2 has provided an introduction to and proposal of two competing models of interfunctional bias. The several components of the model have been reviewed in the literature and formally hypothesized as relationships, in order to proceed with empirical tests of the model. The dissertation will now proceed into chapter 3, which will contain the methods used for testing the proposed model of interfunctional bias.

Chapter 3 – Methods

Abstract

The methods used to collect the data needed to examine the hypothesized relationships in this dissertation are described in this chapter. Study one focused on the antecedent relationship of IFB and the critical test of theory between the hypothesized models, through the collection of self-reported perceptions of salespeople by supply chain employees. The data collection for study one was performed online and the data were analyzed with structural equation modeling. Studies two and three employed an experimental design through an online collection of supply chain employee perceptions of salespeople. The experimental design established the expectation that participants would engage in an interfunctional activity with salespeople. The information about the activity was manipulated for the priming of stereotypes and the existence of external motivators to be non-prejudiced. These manipulations and subsequent measures of prejudice and behavioral intentions were designed to examine the latter parts of the hypothesized models of IFB. Multiple regression was utilized to analyze the data acquired in study two.

Introduction

This chapter contains a description of the research methods used to examine the competing models of interfunctional bias described in chapter 2. The primary objective of this research is to test the hypothesized relationships in the proposed models. These hypotheses require the testing of mediated and moderated paths, between both latent and observable variables in an effort to show nomological validity among the variables in the model. A secondary objective is to adapt measures from social psychology, management, and other literature bases, and validate these for future use by researchers interested in the study of

interfunctional bias. Accordingly, this chapter reports on two studies designed to accomplish these objectives. In each study, the sales function is the targeted focal group.

The first study employed a cross-sectional perception-based survey of supply chain employees as they perceive the sales force for their respective companies. This sample provided data for the critical test of theory performed in study one, which included the examination of hypotheses one through five and hypothesis seven (please refer to Figures 1 and 2). Existing measures of functional identification, organizational identification, neuroticism, and contact were adapted for use in this data collection. Measures of interfunctional stereotyping strength and prejudicial attitude formation are based on existing studies of stereotyping and attitude measurement, but out of necessity, have been developed for this specific application.

Study two consisted of a scenario-based experiment in which participants played the role of supply chain professionals expecting to engage with sales people and engineers of a sponsoring company later in the experiment. The sample again included supply chain employees and their perceptions of salespeople. This experiment permitted the testing of hypotheses five through eight, through an interfunctional bias priming condition, external motivator conditions, and the measurement of IMS, prejudice, and discriminatory behavioral intentions. Therefore, the experiment in study 2 was planned to consist of a priming manipulation, and two manipulations of external motivation to respond without prejudice, resulting in a 2(high, low prejudice) x 2 (high, low social norm) x 2 (high, low incentives) factorial design. These manipulations will be further explained below.

The anticipated benefit of a multiple-method dissertation is to enable the examination of the entirety of the proposed model. The survey in study 1 provided a critical test of theory between interfunctional bias models A and B, examining interfunctional bias through an analysis

of its hypothesized antecedents and moderators of an antecedent relationship. The experimental method in study 2 approached the behavioral domain of interfunctional bias (i.e., discrimination) through the collection of behavioral intention data. Together, these studies permitted the examination of not only the sources of interfunctional bias, but also the several domains and moderating variables of the phenomenon. More thorough descriptions of these studies follow.

Study 1

The first study sought to establish the means by which stereotypes and prejudice come to exist and exhibited between the functional units of organizations through a critical test of theory between two hypothesized models. Study one was restricted to the examination of the relationships between functional identification, interfunctional stereotyping strength, and interfunctional prejudice, including several antecedents and moderators of these relationships. Thus, study one excluded the external motivator and discriminatory behavioral intention variables, which were examined in study two. Referring to figures one and two, hypotheses one through five and seven were examined in study one.

Data Collection and Sample

Data was collected in study 1 through a perceptual, cross-sectional survey of supply chain professionals. This was accomplished through the Qualtrics.com survey creation and distribution tool. This tool permitted respondents to take the survey online, at their leisure. This also permitted researchers to target the survey to a sample of supply chain professionals, as desired. An email contact list of such a sample was obtained through the industry contacts at the University of Tennessee. Other professional groups and contacts were used to contact supply

chain employees. As well, a portion of study one participants were incentivized with a donation to a children's charity for their participation.

The study instrument presented respondents with measures of functional identification, organizational identification, neuroticism, contact, interfunctional stereotype strength, interfunctional prejudice, and internal motivation to respond without prejudice. Thus, the operationalization and measurement of these constructs is critical to this study and will now be reviewed.

Operationalization of the Proposed Variables

Measuring Functional Identification

Multiple-item measures of functional identification within firms are not uncommon in the marketing literature. Fisher et al. (Fisher, Maltz, and Jaworski 1997) were pioneers in the use of functional identification as a predictor of interfunctional cooperation, and specifically, interfunctional information sharing. Their operationalization of functional identification was, however, integrated with organizational identification. Through the use of a semantic differential scale, these authors captured the level of functional identification *relative* to their organizational identification. This scale was termed relative functional identification (Fisher, Maltz, and Jaworski 1997).

Despite the perpetuated use of this scale, for our purposes here, its operationalization of functional identification is inappropriate. Individuals can have multiple identities and identification with multiple groups simultaneously (Johnson et al. 2006). This suggests that members of the functional unit may both highly identify with the functional unit *and* with the

organization (Wieseke et al. 2012). The need to account for multiple identities will be addressed through the predicted moderator of organizational identification, rather than through a scale of relative identification. Therefore, functional identification will be operationalized with a scale that captures the absolute level of identification one has with their functional unit rather than the relative level.

Mael and Ashforth (1992) developed a scale to measure the extent of identification with a group. Specifically, they used a six-item strongly agree to strongly disagree five-point scale that measures the extent to which people personally feel the effects of criticism or praise of the group, among other items. Although this scale was used initially in the context of measuring identification with ones alma mater, the originators suggested that “these [items] can be modified for use in other organizations” (Mael and Ashforth 1992, p 122). One extension of this scale is particularly relevant to this dissertation. Specifically, the use of the scale at the sales-team level suggests the suitability of the use of this scale at the functional unit level (Wieseke et al. 2012). To limit confusion around the items, participants were instructed that the “functional work group” referred to the group of people they work alongside, perhaps in their department.

The adaptation of the scale included the following items on a seven-point Likert agreement scale (Wieseke et al. 2012):

1. When someone criticizes the colleagues in my functional work group, it feels like a personal insult.
2. I am very interested in what others think about the colleagues in my functional work group.
3. When I talk about the colleagues in my functional work group, I usually say “we” rather than “they.”
4. My colleagues’ successes are my successes.
5. When someone praises the colleagues in my functional work group, it feels like a personal compliment.
6. If a story in the media criticized the colleagues in my functional work group, I would feel embarrassed.

“Functional work group” replaced “my sales district” in the applicable items, in order to elicit an appropriate response for the salient functional unit in which participants operate. These items reflect dimensions of finding identification with one’s functional unit and their aggregate score serve as the operationalization of the functional identification construct.

Measuring Interfunctional Stereotyping Strength

Stereotypes are generalized beliefs about groups of people that transfer to individuals based on their group membership. These beliefs tend to ignore individual differences and assign the same characteristics, attributes, and behaviors to all members of the out-group. Stereotyping beliefs can vary in their content, degree, and valence, each of which has been measured in studies on race, gender, and age. The contextual dependence of beliefs made the adaptation of these measures inviable. Therefore, the measurement of the strength of stereotype beliefs required the compilation of potential stereotype belief contents. Once the contents of the context-specific stereotype beliefs were known, measures of their strength could be collected. Compiling contextual stereotype beliefs in the first place, required collecting the potential stereotypes that exist for the specific outgroup being studied.

The out-group being studied in this dissertation is the sales functional unit within ideographic organizations. In order to capture the breadth of potential stereotypes that can be held about salespeople, a pilot study was conducted using a sample of western supply chain professionals sourced through the Mechanical Turk worker sourcing program provided by Amazon.com. Each participant was screened for English proficiency and their professional status in a supply chain role. Participants were compensated three dollars for taking the survey. Only

participants from unique Internet Protocol addresses and from a negative longitudinal location were retained. The final sample size is 104 participants.

The pilot study asked participants to provide their beliefs about salespeople in an open response format. Specifically, participants were first asked: “When you think of the salespeople in your organization, what comes to mind?” Second: “What are some of the key words you would use to describe people in the sales department?” Third: “When people you work with talk to you about the sales people in your organization, what do they say?” The open responses provided for these questions were then coded using open, axial and selective coding, stemming from the grounded theory tradition (Strauss and Corbin 1990). The belief themes that emerged from this study served as the foundation for the range of stereotypes that were detected from supply chain employees in the measurement of their stereotype strength. Negative themes were explicitly sought for use in the measurement of negative stereotypes, although positive themes were also collected. The themes included the following negative general beliefs about salespeople: that they are dishonest, renegades, aggressive, impersonal, arrogant, ignorant, lazy, and overpaid. Again, these were the full extent of the negative and general beliefs that supply chain professionals held about the salespeople in their organization, across the entire sample. A review of the in-vivo basis for each is warranted.

First, there is a pervasive stereotype that salespeople are not honest and that they mislead in order to achieve their goals. One participant expressed a strong stereotype that salespeople “are always cutting deals that mislead the customer” (Participant 94). Others expressed less conviction in the dishonesty of salespeople: “Some feel more strongly that the sales team can be a bit dishonest, and some feel a little less this way than I do.” For yet others, this dishonesty stereotype was the first belief that came to mind: “When I think salespeople in my organization,

most of them are very good talkers, they know how to pitch a product, however, sometimes they won't always tell the truth, or over exaggerate things” (Participant 102).

Second, salespeople were described as being renegades. Renegades are people who forsake their responsibility in one cause, in favor of another. Specifically, salespeople are stereotyped as not being concerned about other functional units, nor are they concerned with the success of the organization. Their actions are cues to others that they are renegades. Participant 208 stated:

When people I work with talk to me about the salespeople in our organization, they tend to group them as individuals who would do anything to make the sale and typically overpromise to the customer which then puts our organization on the spot to try and "jump through hoops" to deliver something that is custom or non-standard.

Overpromising to the customer and causing strain on the organization may be seen as a positive necessity to the salesperson, but to the supply chain employee it is perceived as detrimental to their functional unit. Participant 33 suggested that “they give out way too many false promises that we are then forced to either meet or deny.” As this quotation implies, salespeople are believed to put an undue hardship on the functional units in the organization. One participant stated that “we dread picking up the phone or seeing an email from them whenever it happens because we know that the request will likely be difficult to accomplish” (Participant 67).

Participants not only expressed concern about the difficulties their functional units face because of salespeople; concern for the ill-effects for the entire organization were also brought up. Participant 67 also suggested that: “Their end goal seems to be to make the customer happy and complete a sale regardless of what impact that has on the company in the long run.” Supply

chain employees highlighted the short-term position taken by the salespeople. This is related to a concern with loyalty, as expressed by participant 208:

People in my organization tend to view salespeople as very different from themselves in terms of corporate DNA - and in many cases, don't always view these salespeople as loyal to the corporation and willing to jump ship to a competitor if a better deal comes down the road.

This lack of loyalty and rouge-like behavior has led to the stereotype that the salespeople operate as renegades, putting other interests before the organization and other functional units. This renegade behavior is sometimes perceived as selfishness, but the axial coding performed in this study did not lead to a selfishness motivation behind the renegade stereotype, though it may be a contributor.

Third, salespeople are often perceived as being aggressive or pushy, even in non-selling interactions. One participant said that “they are often overeager and can come across as pushy or rude” (104). Another participant stated that they “think of people who are generally pushy and aggressive to get what they want. I think of people that won't take no for an answer” (206). Also that “they are always selling, even if they are just chatting over coffee” (237). Participants also indicated what others had said to them about perceiving aggressiveness: “They say that they would find most of their approaches abrasive if they were clients” (74).

Fourth, salespeople are sometimes seen as impersonal. Salespeople were described as being impersonal due to their continual need to forward their interests within the company. Participant 124 reported that:

I think the most common thing I hear about them is rather... Machiavellian; that they feel that the end justifies the means. I've heard some people say that they feel

a bit uncomfortable around them, because they seem so focused on work and success -- rather than the soft values.

The “soft values” appear to make a difference in how salespeople are perceived.

Establishing interpersonal relationships can be essential to breaking down intergroup barriers (Allport 1954), therefore, holding a stereotype that salespeople do not generally pursue interpersonal relationships can be especially detrimental. Participant 115 also expressed a belief in the tendency of salespeople to not foster interpersonal relationships with others in the firm. “Salespeople have a terrible reputation in companies because they are patronizing all the others positions & employees.” A lack of genuineness in the way salespeople interact with members of other functional units appears to have influenced this negative stereotype.

Fifth, several participants expressed that the salespeople are arrogant and look down on others in the organization. As participant 24 believes that their “outside sales team... [are] very uppity corporate types, not the easiest to get along with.” Another participant stated that salespeople “are annoying, full of themselves, think they are better” (38). In many companies salespeople wear professional, higher-end clothes, to present the best face of the company to the customer. The perception of arrogance goes beyond looks, however, as perceptions of arrogant behavior were also expressed. One participant said that “There has been a time or two that we have heard of negative interactions and workers talking down to others.” This behavior further feeds the belief that salespeople are arrogant and tend to talk down to others in the organization.

Sixth, there exists a perception among employees in more technical functions, that salespeople are ignorant about detailed aspects about the business. One participant said that “they don't seem to understand a lot about how the logistics work in our organization” (37).

Another participant believes that salespeople “are typically a lot less technical than those of us in manufacturing.” This participant’s stereotype seems to be fed by the unrealistic expectations of the salespeople: “They have a singular focus which is great for them but often is annoying for people who aren’t in sales as the expectations of salesmen are often less than realistic to be honest” (77). In a final example, participant 208 stated: “I also tend to think of salespeople as individuals who understand the basic details but may not always understand the next layers of details beyond, and sometimes don’t have a complete understanding of the product or service that they are selling.”

Seventh, participants expressed a perception that salespeople are lazy or do not work hard. Participant 294 considered the sales function to be the “easiest job in the organization,” while it was another’s perception that “the sales team often slacks” (Participant 12). This perception of not working hard was, by some participants, connected to the travel and social perks related to professional selling. “Although they seem to have the easiest schedule, co-workers forget that just because they are not in the office, it does not mean that they are slacking in their responsibilities. When it comes to perks, I do agree that they receive things other employees do not, (sporting event tickets and golf tournaments)...” (Participant 294). Regardless of the source of this belief, salespeople can be perceived as not working as hard as others in the organization.

*****Eighth, there is a general belief that salespeople are overpaid for the amount of work and type of work they do. This stereotype was expressed several times in the form of envy. Said one participant about what other people talk about: “They generally envy them since they get commission and they rant about how lucky they are” (206). Similarly, another participant stated that: “A lot of people I work with are envious of the amount of money that many of the

salespeople make” (76). Beyond envy, there is a general belief in the compensation and perks that salespeople undeservingly receive.

I think what upsets a lot of folks is that a sales person typically doesn't need a master's degree or a higher education and if they are good at selling they can make large sums of money and have the respect of the top management as a result.

With this eighth and final stereotype collected in the pilot study, the detection and measurement of stereotype strength was possible.

The following measure that is based on the qualitative data from the pilot study was used to collect data on interfunctional stereotyping strength. Participants were asked the extent to which they agree with each of the following statements:

1. Salespeople tend to mislead others.
2. Salespeople are like the cowboys of the organization, out doing their own thing.
3. The people in sales tend to act aggressively toward others.
4. Salespeople tend to keep others in the company at a distance.
5. Salespeople tend to feel like they are superior members of the organization.
6. In general, salespeople are ignorant about the company's operations.
7. It seems like people in sales do not work as hard as other company employees.
8. Salespeople generally get paid more than they deserve.

Four positive beliefs about salespeople were also created from the pilot study data and were included with these negative beliefs, in random order, to balance the valance of the scale. This measure utilized a 7-point agreement scale from strongly agree to strongly disagree. Higher scores represent more strongly held beliefs.

Measuring Organizational Identification

Organizational identification has been developed empirically in the management literature and adapted for use in marketing contexts (Homburg et al. 2011; Wieseke et al. 2012). As discussed previously, the relative functional identification scale is not suitable for measuring functional identification independently from organizational identification, and vice versa. Therefore, direct measures of each are preferred. Identification with an organization is principally similar to identification with other social groups, including functional units (Wieseke et al. 2012). Therefore, organizational identification was measured with the same scale used for functional identification, adjusted for use at the organizational level:

1. When someone criticizes my company, it feels like a personal insult.
2. I am very interested in what others think about my company.
3. When I talk about my company, I usually say “we” rather than “they.”
4. This company’s successes are my successes.
5. When someone praises this company, it feels like a personal compliment.
6. If a story in the media criticized company, I would feel embarrassed.

Measuring Trait Negative Affect

The NA measures were adapted for use in this study from the Negative Affect Schedule – Short Form (aka PANAS), which has been shown to hold acceptable correlation levels with longer forms of the measurement of NA (Thompson 2007). For measuring the *trait* of NA, rather than the state, the following wording was presented to participants: “Please use this list of feelings to describe yourself as accurately as possible. Describe yourself as you see yourself at the present time, not as you wish to be in the future. Describe yourself as you are generally or typically, as compared with other persons you know of the same gender and of roughly your same age.” This measure’s introduction frames the scale as a long-term and enduring self-assessment of one’s affect. The measure proceeds with the following stem: “Thinking about

yourself and how you normally feel, to what extent do you generally feel...?” The list of feelings for NA are 1) upset; 2) hostile; 3) ashamed; 4) nervous; and 5) afraid. A 7-point scale was used, with scale points from “never” to “always”.

Measuring the Conditions of Contact

The contact hypothesis has received widespread attention since Allport (Allport 1954), with numerous variations in context and measurement over the decades of its use. Assessment of the conditions of contact were historically context-dependent and not standardized. Accordingly, scholars in the field have criticized the literature for the inconsistency in the operationalization of the contact variables (Hewstone and Brown 1986).

One important exception is in the context of racism in school systems (Gaertner et al. 1994). With the desegregation of public schools across America, a great deal of interest in this context emerged. Green, Adams, and Turner (1988) developed and validated the School Interracial Climate Scale for use in this context. This context and scale are appropriate for adaptation into this dissertation, given the several parallels between the school and organizational contexts. Schools, like organizations, have a management structure, so items that measure principal or teacher support will be modified to state manager or supervisor support. Likewise, salespeople and supply chain employees will be substituted for the racial groups used in the original and subsequent scales (Gaertner et al. 1994; Green, Adams, and Turner 1988).

The development of the school interracial climate scale involved a factor analysis of between 9 and 15 items for each dimension of contact (Green, Adams, and Turner 1988). However, Gaertner et al. 1994 reported the use of 3 items for each of the 4 contact dimensions, which is a substantial reduction in items. Given the unique context to which this scale is being

adapted, it is prudent to include more items in the analysis than fewer. For this reason, the six highest factor loading items from Green, Adams, and Turner (1988) have been adapted in this study.

Interdependence

1. The salespeople and supply chain employees in this organization need each other.
2. The salespeople and supply chain employees have important things to offer each other.
3. After salespeople and supply chain employees get to know each other, they find they have a lot in common.
4. Salespeople and supply chain employees are better off when they work together than when they stay away from each other.
5. Salespeople and supply chain employees at my organization are all working together for the same things.
6. Employees in this organization think it's good to get to know other employees from other functions.

Supportive Norms

1. The managers in my organization encourage employees to make friends with employees in other functions.
2. The supervisors in my organization encourage employees to make friends with employees in other functions.
3. The managers generally think that all of the employees should be friends.

4. Supervisors here like for employees from different functional units to understand each other.
5. The supervisors in this organization generally like for employees from different functions to get along.
6. This is an organization in which everybody is encouraged to be friends.

Interpersonal Interaction

1. I talk to employees from different functions only when I have to.
2. My co-workers would think badly of me if I spent time with employees from other functions.
3. I often go through a whole work day and never say more than a few words to an employee from a different function.

Equal Status

1. Managers in this organization are fair to both salespeople and supply chain employees alike.
2. All employees of this organization are treated equally.
3. Managers at this organization pay attention to both salespeople and supply chain employees.
4. I don't know of any functional unit that gets special treatment in this organization.

A seven-point Likert scale was used to measure the extent to which participants agree with each item in these conditions of contact constructs.

Measuring Interfunctional Prejudicial Attitude Formation

Interfunctional prejudice is at the center of the model of interfunctional bias and its measurement is crucial to this research. The interfunctional prejudicial attitude formation measurement is a multiple-item measure of the construct. Historically, this is accomplished by utilizing a series of semantic differential scales that the participants would use to indicate their perception of how beautiful or ugly, good or bad, pleasant or unpleasant, honest or dishonest, and nice or awful a particular group of people are to them (McConnell and Leibold 2001; Sedlacek and Brooks Jr 1970).

These semantic differential scales were adapted to include potential attitudes that are relevant to the interfunctional context. Specifically, participants were asked to indicate the feelings they have related to salespeople, in general. This was collected on 7-point semantic differential scales that include: Good | bad, sympathetic | not sympathetic, objectionable | acceptable, suspicious | trusting, friendly | hostile, receptive | cautious, pleased | annoyed, pleased | angered, superior | inferior, smarter | dumber, cooperative | uncooperative, accepting | belligerent, favorable | unfavorable, uncomfortable | comfortable, justified | unjustified, and tolerable | intolerable. These were each adapted from a 100-item measure of prejudice, with only these 16 context-relevant items utilized (Sedlacek and Brooks Jr 1970).

Measuring Internal Motivation to Respond without Prejudice

IMS was adapted from Plant and Devine (1998), who developed the scale as a self-reported measure of racism, while considering the difficulties that this task posed due to aversive racism (Gaertner and Dovidio 1986). Aversive racism proposes that the general population, more or less, knows that it is socially unacceptable to make race-based assessments of others,

and act accordingly (See also: McConahay 1986). Therefore, due to the maturity of this race-based social norm, perceived measures of racism are difficult to attain in any usable form.

Plant and Devine were able to show nomological validity for the IMS scale, through a correlational analysis with several other related scales, including: the right-wing authoritarianism scale, the protestant work ethic scale, and the humanitarian-egalitarianism scale, to name a few (1998). As well, subsequent studies by these authors have shown the validity of their measure (Devine et al. 2002; Klonis, Plant, and Devine 2005). In adapting this scale for use in an interfunctional context, it is important to note that there does not exist a strong social norm against avoiding stereotypes of a professional or functional nature. The reworded IMS scale does not specify the context of the prejudice or stereotypes, but measures one's overall propensity to be personally avoidant of prejudice and stereotype. This general measure of internal motivation to respond without prejudice was expected to capture the desired construct. The measures were collected using a seven-point agreement Likert scale, which captures the extent to which the participants agree with the following:

1. I attempt to act in non-prejudiced ways toward others because it is personally important to me.
2. According to my personal values, using stereotypes about other people is okay. (R)
3. I am personally motivated by my beliefs to be non-prejudiced toward others.
4. Because of my personal values, I believe that using stereotypes about other people is wrong.
5. Being non-prejudiced toward others is important to my self-concept.

Measurement Refinement and Use

The collection of these variables enabled the testing of the front-end of the model of interfunctional bias. Each construct has been analyzed using the AMOS software package. A measurement model of the variables was created and multiple-item measures of constructs were

assessed for their convergent and discriminant validity. As well, tests of common method bias have been performed and common variance among the variables is minimal. Aggregated measures of each construct have thus been created using the imputation tool in AMOS on the refined measurement model. For the examination of model A, interaction terms have been created with the imputed constructs, and the analysis of a structural model has been performed. For model B, a full structural model was created using the measurement model, and the hypothesized relationships were tested. Performing both analyses in AMOS enabled a comparison between the two models.

Question Ordering Due to Priming Concerns

The question ordering in this study was carefully delivered in a way that minimizes unwanted priming effects from question to question. First, the multiple-item measures of organizational identification and then functional identification were presented. Next, interfunctional stereotyping strength was measured, followed by interfunctional prejudiced attitudes. The four conditions of contact were measured after that, and were followed by trait negative affect and IMS. Finally, demographic and work history variables were collected last. Chapter 4 provides a more in-depth description of the sample and survey procedure.

Study 2

An examination of the latter-half of the proposed model of interfunctional bias was performed in study 2. Specifically, this includes the relationships between interfunctional stereotyping strength, prejudiced attitudes, and interfunctional discrimination, or the behavioral intentions that are based on interfunctional prejudice, as outlined in hypotheses five and six.

Additionally, the moderating effects of IMS and external motivators to be non-prejudiced on the relationship between stereotyping strength and prejudice is examined in study 2, as outlined in hypotheses seven and eight.

In order to examine these relationships, an experiment with a 2x2x2 factorial design was employed and both interfunctional prejudice and discriminatory behavioral intentions were measured dependent variables in study 2. Interfunctional stereotyping, as well as incentives-based and norms-based external motivators to be non-prejudiced were manipulated. However, a pilot test of study 2 revealed that the social norms had such influence on the rest of the variables, that the stereotyping prime and the incentives manipulation were not exhibiting variance. As will be elaborated upon further in chapter 5, two studies were created from study 2, permitting the manipulation of each external motivator independently. Priming stereotyping beliefs also proved to be a challenge in both variants of study 2, and as a fail-safe, the stereotyping strength construct measures from study 1 were collected in both studies.

Sample

Participants were recruited from a variety of sources, with the sole prerequisite that they are currently employed in a supply chain role. A mailing list was acquired from a supply chain professional organization, which provided the largest volume of participation. Participants were also recruited through Universities, through formal and informal channels. The experiment was conducted individually online, with the participants randomly selected into treatment conditions. As well, a \$10 gift card was provided to each as an incentive for participation. Funding for this and

Experiment Introduction

The experiment began with a description of an interfunctional problem-solving activity that the participants anticipated engaging in with salespeople from the sponsoring company. This description was designed to create the expectation of impending interaction with someone who the participant may or may not hold biased beliefs or attitudes toward. Participants therefore expected to have a team-based experience at some point in the experiment and framed the remainder of the experiment under this expectation. The specific verbiage of the introductory instructions is as follows:

Your participation in this study will include a simulated online problem-solving activity with engineers and sales people from the sponsoring company. Before this simulated online cross-functional activity begins you will be provided with information about the activity and asked a few questions.

Following this and a collection of consent and a qualifying question about their current employment, participants were provided with more information about the simulated activity, in which was included the experiment manipulations.

Experimental Manipulations

The problem-solving activity information was provided to participants, starting with the following brief description.

A long-term customer has recently requested special accommodations that may require product reengineering and potential disruptions to the supply chain. Your task in this online activity will be to arrive at an agreed upon solution, if one can

be reached. You will be working with 2 employees from the sales and engineering functions of the sponsoring company.

This was followed by either a manipulation about the participants' potential incentives in the study or the social norms present in the sponsoring company that also apply in the problem-solving activity. As already discussed, presenting both of these external motivators to be non-prejudiced caused one to overwhelm the other, so two studies were performed to overcome this challenge. Incentives were manipulated in the first study, and social norms in the second. These manipulations are described next.

External Motivator Manipulations

In the incentives study, the control group received a message that “no additional incentive [would be provided] for working cooperatively with others in the simulation.” The incentivized group were told that “the more cooperatively [they] work with the others [in the study], and more additional monetary incentive [they] will receive.” Participants were debriefed immediately following the experiment, explaining that this was a part of the experiment, but that no additional incentive would be provided.

In the social norm study, participants were either informed that “Supply chain professionals at the sponsoring company value and support cooperation between functions when working in teams,” or that “The need to cooperate between functions is not necessarily valued nor supported among supply chain professionals at the sponsoring company.” Thus, participants were randomly assigned to either receive reinforcing social norms, or not.

Stereotyping Manipulation

The third part of the information provided to participants before the anticipated simulation included the following:

Before you interact with the salespeople in the activity simulation, please note that they are employed as salespeople in the sponsoring company. They have been given instructions to behave as they normally would in their workplace.

This statement was intended to set up the stereotyping manipulation, in which the control group received positive beliefs about salespeople and the stereotype-primed group received negative beliefs about salespeople.

For the stereotyping manipulation, participants in the control condition were told that the “supply chain employees [at the sponsoring company] indicated that their salespeople tend to:”

- Be well informed about the company’s operations.
- Be like “pillars” in the organization, supporting others where needed.
- Act like they are teammates to others in the organization.

Participants in the stereotype-primed condition were told the same thing, but the tendencies of the salespeople were changed to reflect negative beliefs. In this condition, salespeople tend to:

- Be ignorant about the company’s operations
- Be like the “cowboys” of the organization, out doing their own thing.
- Feel like they are superior members of the organization.

The researchers expected that with this manipulation, participants should forego their own beliefs about salespeople and adopt the beliefs in this manipulation. As will be reported later, stereotyping beliefs are deeply rooted and not likely to be altered by such a manipulation. In

anticipation of this challenge, a measure of the general measure of strength of negative stereotypes toward salespeople followed later in the questionnaire.

Immediately following the simulation information the participants were told to share the thoughts they have concerning the simulation information they were just provided. These thoughts were collected in an open response format, allowing up to four different thoughts to be collected. Besides providing the researchers with some insight into how the presented manipulation might have been perceived, the thought exercise also permitted the participant to slow down and internalize the information more. This open-response collection of thoughts was followed by the measures of behavioral intentions, prejudice, IMS, and measured stereotyping strength.

Measures of Prejudice and Discriminatory Behavioral Intentions

Interfunctional prejudicial attitudes were again collected in study two, and there was no deviation in how this construct was collected between the studies. The dependent variables in this study also included participant's perceived responses regarding their willingness to cooperate in the expected cross-functional team exercise. At the final stages of the experiment, participants were asked to gauge their willingness to participate in the cross-functional team.

Specifically, participants were asked how likely they will be to do each of the following:

1. Share information with the salesperson.
2. Seek out more information from the salesperson.
3. Consider fulfilling the requests of the salesperson.
4. Take the salesperson's needs into account.
5. Treat the salesperson as a foe rather than a friend.
6. Give the salesperson a "hard time."
7. Let the salesperson have their way with the new product.
8. Stand up for the needs of the supply chain, even at the expense of the needs of sales.

The scale for these items is a 7-point scale from very unlikely to very likely.

Study 2 then concludes with a collection of measures of IMS, stereotyping strength, demographic/work history questions, and finally a full debrief of the study.

Conclusion of Chapter 3

Chapter 3 has described the methods, sampling, measurement and procedures for two studies that were utilized to examine the model of interfunctional bias. Study one enabled the testing of the antecedent relationship, along with its moderating variables, through a cross-sectional survey of supply chain professionals. Study two permitted the examination of the cognitive, affective, and behavioral domains of interfunctional bias, and their moderators, through a scenario-based experiment. The detection and examination of interfunctional bias as the outcome of functional identification is a meaningful contribution to the marketing literature and should elicit improved managerial understanding of interfunctional dysfunctional behavior.

Chapter 4 – Essay 1

Abstract

Interfunctional cooperation is often sought in corporate organizations, but many companies continue to struggle with barriers to cooperation which hamper interfunctional relationships and harm operational efficiency and effectiveness. Based on the pervasive social problem of intergroup bias, interfunctional bias is hypothesized to be a source of interfunctional negative attitudes, a proposed barrier to interfunctional cooperation. Divergent literature in marketing and psychology regarding the expected antecedent relationships of interfunctional bias motivates the development of two competing hypothesized models of interfunctional bias. To test the two models, a questionnaire was administered to supply chain employees regarding their interfunctional connections with salespeople and the developed hypotheses of each model were examined. The psychological model focused on direct, as opposed to moderated relationships with interfunctional stereotyping strength, was found to be a stronger fit than the model supported by the marketing literature. Specifically, the findings revealed that organizational identification, personality trait negative affect, and equal status between the functional groups was directly related stereotype strength. In addition, interfunctional stereotyping strength and employees' internal motivation to respond without prejudice were both found to relate with interfunctional prejudiced attitudes. These findings provide theoretical guidance to future research on interfunctional bias and managerial implications toward the improvement of interfunctional cooperation through the reduction of interfunctional prejudiced attitudes.

Introduction

Intergroup bias, in the form of stereotyping and prejudice, is pervasive in society as members of one group hold generalized beliefs about and attitudes toward members of other groups (Tajfel 1978). In society this occurs most notably between groups of race, age or gender (Albee 1981). These and other forms of bias occur as individuals perceive others as not a member of their social group and seek to reinforce their own social position through the denigration of the other person or people (Hewstone, Rubin, and Willis 2002), whether intentionally or unintentionally. In-groups are thus formed when someone perceives others in their social environment to be like them, and out-groups form as others are perceived to differ (Tajfel 1970). Within corporate organizations, in-groups and out-groups often form based on employees' workplace function, potentially leading to, what has been coined, interfunctional bias (Sethi 2000). Although intergroup bias is pervasive in society and has prompted an extensive body of literature, interfunctional bias (IFB) within corporate organizations has yet to be examined thoroughly, and its pervasiveness is unknown. Several studies have found evidence of IFB (Cadogan et al. 2005; Hennessy and West 1999; Keaveney 2008), supporting the basic proposal that when interfunctional cooperation is desired in corporate organizations IFB can be a potential barrier to cooperation

Cooperation between functional units has been a topic of business research for decades (Seiler 1963) and has largely focused on reducing barriers to cooperation (Walton 1967; Walton and Dutton 1969). The field has largely concluded that interfunctional cooperation is necessary for the efficient and effective operation of a corporation, as breakdowns in cooperation “siphon... energy away from the productive work” (Seiler 1963, p 128). Put another way: “Interdepartmental conflict means there is interference rather than considerateness, information

is distorted or withheld, and attitudes of annoyance and distrust exist between departments” (Walton, Dutton, and Cafferty 1969, p 526). Simply, interfunctional cooperation enables the effective performance of the business (See also: Esper et al. 2010; Lawrence and Lorsch 1967).

Unfortunately, companies are still struggling to facilitate employee cooperation across functional lines. Iyengar and Gupta (2013) point out that decades after the development of sales and operations planning, an important process in demand planning (Esper et al. 2010), companies have still not developed effective interfunctional cooperation in this area. Specifically, “67 % of companies struggle to get beyond stage 2 of S&OP maturity” (Gartner 2014, p 1). The area of new product development has also been reported to fall short of optimal in the area of interfunctional cooperation, which is required for this part of the business (Troy, Hirunyawipada, and Paswan 2008). Moreover, it was reported that “some 69% of senior managers describe relations between marketing and R&D as collegial, but only 34% of mid-level managers saw the relationship that way” (Kotler, Wolcott, and Chandrasekhar 2009, p 1). It is clear that operating with interfunctional cooperation remains a critical challenge.

In psychology, over numerous decades, the extant literature on intergroup bias has extensively examined stereotyping beliefs and prejudicial attitudes (Brewer 2001; Brewer 2003; Hewstone, Rubin, and Willis 2002; Oakes 2008; Slater and Narver 1995; Tajfel et al. 1971; Tajfel and Turner 1979; Turner and Reynolds 2001). Research in business has primarily drawn from theories first developed in social psychology (Cadogan et al. 2005; Homburg et al. 2011; Sethi 2000; Wieseke et al. 2012); however the business discipline has yet to realize the development of a theory of IFB to include its antecedents and contingencies. The research presented here addresses this gap in the literature by examining IFB as an explanation for dysfunctional cooperation between distinctive functions units within companies.

The literature supports two antecedent models of IFB. The first has received considerably more attention in the business and marketing literature, and suggests that one's identification with their functional unit is positively related with the strength of interfunctional stereotyping beliefs. In this model, this relationship is further moderated by individual, interpersonal, and environmental conditions. Being strongly affiliated with an in-group does not perfectly relate to dis-affiliation with a particular out-group, although instances of this can be recognized. Thus key moderators of the antecedent relationship are believed necessary to gain a more complete picture.

The second antecedent model of IFB under consideration has been widely supported in the psychology literature on institutional desegregation. This literature has focused on several conditions of contact between groups where intergroup bias is likely, to determine under what conditions stereotyping might be reduced. These conditions are interpersonal and environmental, but unlike the first model, also play antecedent roles alongside function identity, rather than moderating roles within the model. Thus a critical test of theory is called for to further understand the antecedent relationship(s) to interfunctional bias.

The examination of this phenomenon within organizations is very important in light of the often desired or required level of cooperation between functions that permit the organization to operate. This research is especially critical in the marketing context and supply chain contexts, as these are boundary-spanning functions (Moorman and Rust 1999), with cross-functional integration as a component of market orientation (Narver and Slater 1990; Slater and Narver 1995).

The Adoption of Intergroup Bias to Corporate Organizations: Interfunctional Bias

IFB is akin to the often studied and well-understood phenomenon of intergroup bias. Addressing IFB first requires a thorough understanding of intergroup bias. “Intergroup bias refers generally to the systematic tendency to evaluate one’s own membership group or its members more favorably than a non-membership group or its members” (Hewstone, Rubin, and Willis 2002, p 576). Effectively, being a part of a group is important to one’s self-concept and social identity, and protecting this group membership through out-group derogation is a natural tendency (Ashmore, Deaux, and McLaughlin-Volpe 2004). This out-group derogation is generalized and can be exhibited through stereotyping beliefs, prejudiced attitudes, and/or discriminatory behavior (Hewstone, Rubin, and Willis 2002; Mackie and Smith 1998). A review of the underlying theories and literature related to intergroup bias now follows.

Bounded Cognitive Capacity: Automatic Assimilation and Differentiation

The marketing literature has used the concept of categorization extensively in brand image research as its foundational tenet (Aaker and Keller 1990; Gutman 1982). Similarly, this study turns to bounded cognitive capacity and the resulting categorization, in building a model of IFB. Specifically, it is humankind’s tendency, within our mental schemas, to construct a prototype of each categorized object, as a mental anchor to the category (Sujan 1985). The use of prototypes permits rapid mental recall and comparative recognition, albeit, using the generalized image of the prototype (Alba and Chattopadhyay 1985). It is through categorization and prototyping that out-group members are generally perceived, especially if they are not interpersonally acquainted (Gaertner and Dovidio 1986). Thus, the foundation for intergroup

bias involving race, age, gender, and virtually any conceivable group-based distinction, is category prototyping (Brewer 1993; Brewer 1991; Keaveney 2008).

Prototypes have been studied in organizations (Keaveney 2008). One prototype that is likely familiar to a wide range of people is the prototype of salespeople (Hartman 2006). Research suggests that consumers categorize others and activate stereotyping beliefs about them if they act like, and are perceived as salespeople (Babin, Boles, and Darden 1995; Tuk et al. 2005). Research has also found, not surprisingly, that stereotyping beliefs exist in corporate organizations (Homburg et al. 2011; Keaveney 2008). Examples of actual stereotypes held by engineers about marketers include: “[Marketers] are all about the hype” and “[Marketers] are too bubbly – especially at 7 a.m.” (Keaveney 2008, p 655). The marketers in this study also reported stereotypes about the engineers. They said that “[Engineers] stifle creativity. They don’t compromise” and “[Engineers] live in a personality vacuum” (Keaveney 2008, p 656). Again, bounded cognitive capacity and categorical prototypes are the basis for generalized beliefs between social groups, including functional work groups in corporate organizations.

Social Group Formation Outside and Inside of Organizations

Social group membership benefits individuals by validating their world view (Solomon, Greenberg, and Pyszczynski 1991) and providing prescriptive norms of behavior (Hogg and Terry 2000). However, social group formation is not always based on the potential benefits of group membership (Tajfel 1970; Tajfel et al. 1971; Tajfel 1978) and may form due to any perceived differentiator, even if that differentiator is stigmatized by others or is arbitrary and temporary. Whatever the group in which one finds him or herself a member, there is a tendency

to promote or give favoritism to the in-group and not prefer, or even to denigrate the salient out-group. This tendency can be amplified if the category prototype is largely negative.

Functional workgroups within corporate organizations are not immune to such favoritism and bias (Keaveney 2008; Sethi 2000). However, other group formation is possible within organizations, such as between the employees of a particular product set (Hennessy and West 1999), between the sales function and the company headquarters (Homburg et al. 2011; Wieseke et al. 2012), or between exporting and non-exporting functions of the organization (Cadogan et al. 2005). One contribution of this research is the empirical examination of IFB, specifically, rather than bias between a broader set of employees or other divisions of groups.

The Need for and Source of Positive Social Identity

Positive social identity is the innate desire to be socially associated favorably (Hewstone, Rubin, and Willis 2002). Individuals not only seek group membership that is viewed positively by others, they also seek to build-up or promote their in-groups (Tajfel and Turner 1979). Positive social identity plays a critical role in IFB, as employees seek to promote their functional in-group and function's ideology within the firm. This is consistent with Stangor (2009): "Indeed social identity is a — perhaps *the* — fundamental underlying motivation behind prejudice and discrimination" (p 3). The effects of positive social identity are proposed to work the same way with IFB as it does with intergroup bias. Recent business research has only mentioned or assumed this important aspect of bias (Hennessy and West 1999; Sethi 2000), although it has historically been a part of some studies (Brown et al. 1986; Brown and Williams 1984).

The Domains of Interfunctional Bias: Stereotyping, Prejudice, and Discrimination

Like intergroup bias, IFB has three domains, including stereotyping beliefs, prejudiced attitudes, and discriminatory behaviors (Mackie and Smith 1998; Wilder and Simon 2001). The literature suggests that these exist in a belief to attitude to behavior linkage.

Interfunctional stereotypes are the generalized beliefs employees hold about out-group members, related to their characteristics, attributes, or behaviors (Hilton and Von Hippel 1996; Wieseke et al. 2012). Stereotypes are not, of necessity, inaccurate (McCauley, Jussim, and Lee 1995), and although stereotypes do tend to be negative, positive stereotypes also exist (Stangor 2009). For the purpose of studying potential barriers of interfunctional cooperation, this study will focus on how strongly held are the negative stereotypes of employees.

Traditional stereotyping is present in the branding literature (Liu, Johnson, and Johnson 2005), as well as the management literature (Nguyen and Ryan 2008). However, interfunctional stereotyping has only recently become a focus of academic research. Keaveney (2008) provided a foundation for the study of stereotyping through the explication of the beliefs that marketers hold toward engineers and vice versa. Akin to interfunctional stereotyping, the negative stereotyping beliefs that salespeople hold about employees at the headquarters location of the company were recently examined and found to relate negatively with sales performance and customer satisfaction (Wieseke et al. 2012). This literature builds on original conception of IFB, and the proposed negative effects of stereotypes, which “hinder effective joint working between members of various functional areas” (Sethi 2000).

“Stereotypes represent the cognitive component of prejudice” (Dovidio et al. 1996, p 283), meaning that prejudices have a strong relationship with the belief component of bias. Prejudices are attitudes, and are defined in this study as the “negative evaluations of members of

out-groups” (Stangor 2009, p 3; See also Dovidio et al. 1996). Although it is possible to develop positive evaluations of out-group members, prejudice, more than stereotyping, has consistently been used in conjunction with negative evaluations rather than positive (Stangor 2009). As with interfunctional stereotypes, interfunctional prejudices reside in internal processing (Sethi 2000).

Although interfunctional discrimination is beyond the scope of the empirical portion of this research, it bears review as a critical domain of IFB, and as the vehicle through which stereotyping and prejudice become barriers to interfunctional cooperation. Levy and Hughes suggested that “Discrimination is considered the behavioral component of prejudice” (Levy and Hughes 2009, p 25). Discrimination has also been referred to as “acting out prejudice” (Allport 1954, p 14) or an “[in]equality of treatment” (p 51). This inequality is decidedly due to the generalized nature of intergroup bias. Interfunctional discrimination is exhibited uniquely from racism, sexism, or ageism, which are the most researched areas of intergroup bias. Within organizations, IFB might, for example, be exhibited as an unwillingness to share information (Fisher, Maltz, and Jaworski 1997), to comply with corporate guidelines (Wieseke et al. 2012), or to communicate effectively (Cadogan et al. 2005).

Critical Test of Theory: Testing Two Models of Interfunctional Bias

The marketing literature is at odds with the psychology literature regarding the antecedents of intra-organizational bias, prompting a critical test of theory. The marketing literature has largely relied on the self-identity theoretical perspective of IFB. This literature situates some form of functional identification—the extent to which the employee’s self-concept or self-perception is based on their functional group membership—as the sole or primary antecedent of intergroup bias (Cadogan et al. 2005; Wieseke et al. 2012). This antecedent

relationship has historically been examined alongside of moderating variables, including information sharing norms, integrated goals (Fisher, Maltz, and Jaworski 1997), and charismatic leadership (Homburg et al. 2011). Alternatively, the social psychology literature includes a broader base of antecedent considerations, including social identity theory, conditions of contact theory (Gaertner et al. 1994), motivation theory (Butz and Plant 2009), and personality theory (Watson and Clark 1984). The present critical test of theory will position these variables as moderators of the identification antecedent of IFB in model A and as direct antecedents in model B. These models are depicted in figures 3 and 4, respectively.

The Functional Identification Antecedent of Interfunctional Stereotyping

One's function is an established starting point for both models of IFB. What a person does as his or her profession is often a substantial part of who they are (Tajfel 1982; Thatcher, Doucet, and Tuncel 2003). "Thus, occupations serve as major identity badges for situating individuals in the organization, and occupational incumbents frequently define themselves in terms of their occupation" (Ashforth, Harrison, and Corley 2008). In addition, functional silos and their separation "by vocabulary and discipline and training" (Zinkhan and Zinkhan 1997, p 4) and world views (Fisher, Maltz, and Jaworski 1997), have the potential to establish strong in-groups and out-groups in organizations. While employees do not always find in-group membership within their functional unit, they often do. Functional identification is the degree to which an employee's self-concept is based on their functional group membership.

The literature on prejudice and attitude formation suggests that the strength of stereotyping beliefs correlate with both in-group identification and prejudicial attitude formation (Dovidio et al. 1996). Sethi (2000) proposed that "such preference... for one's own functional

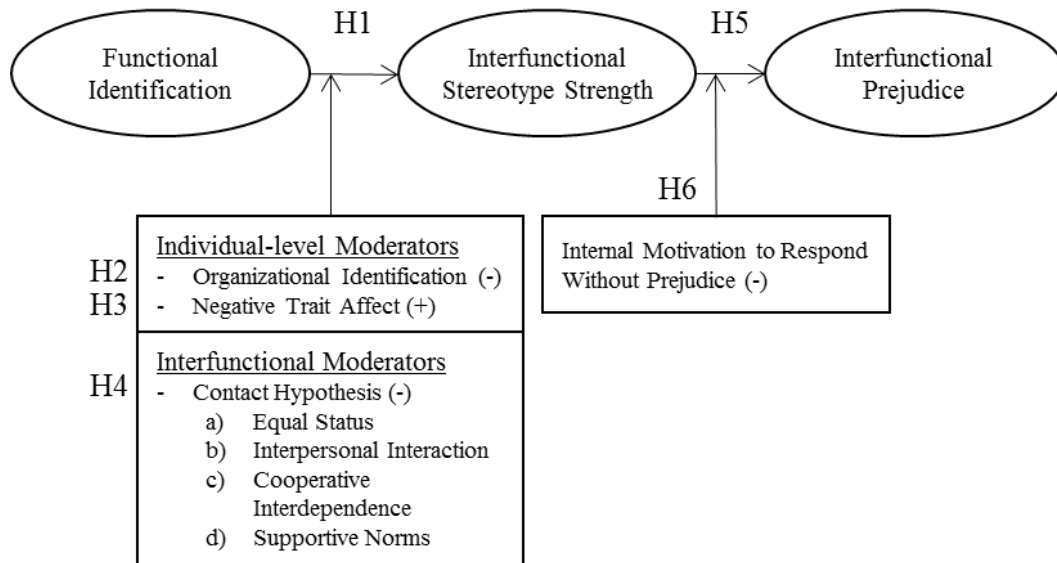


Figure 3 – Interfunctional Bias Model A: Functional Identification Antecedent with Moderators

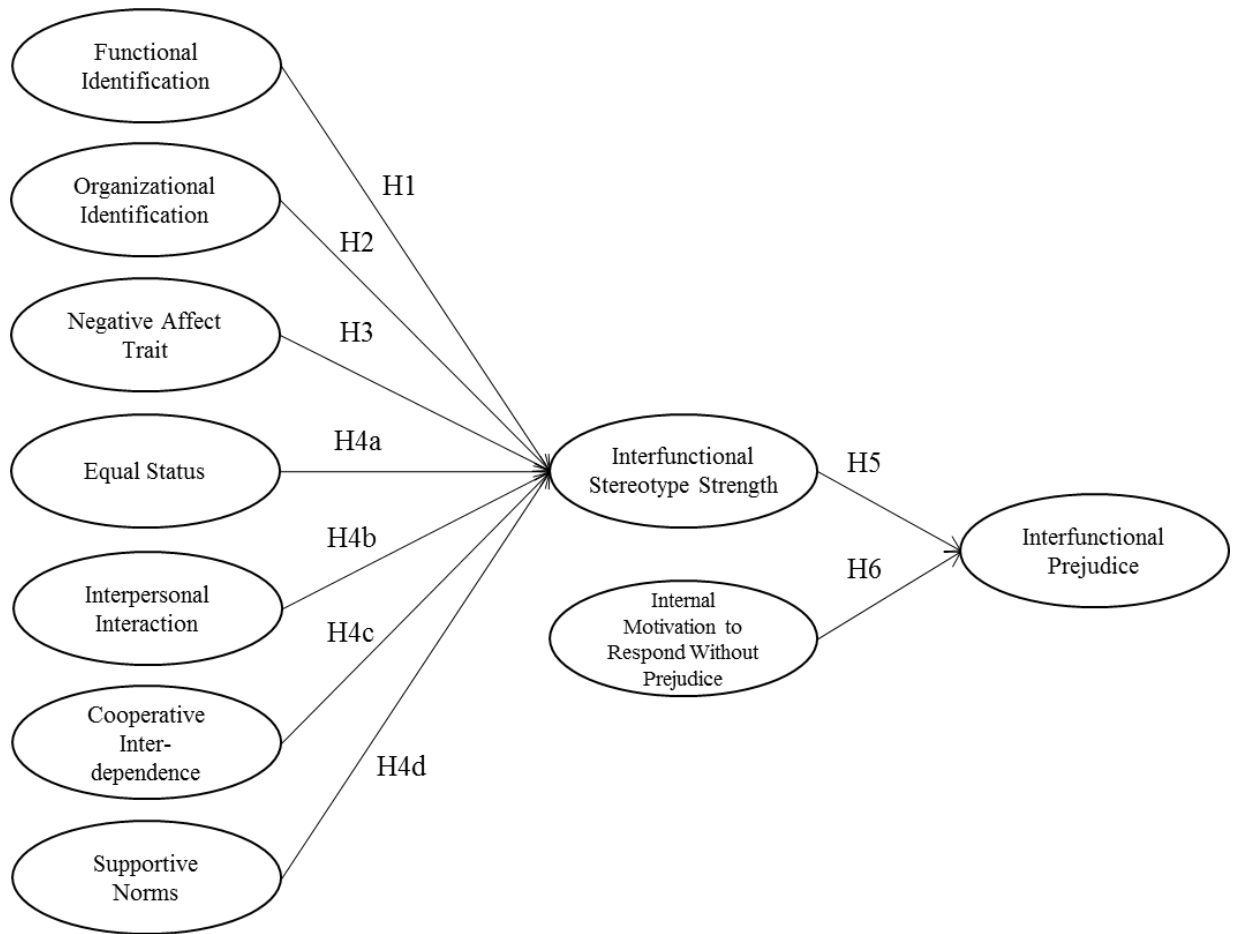


Figure 4 – Interfunctional Bias Model B: Direct Effects Antecedents without Moderators

area over others' creates and sustains interfunctional biases and stereotypes" (p 332).

Empirically, identification has been shown to inhibit communication between functions (Fisher, Maltz, and Jaworski 1997) and to positively relate with interfunctional conflict (Cadogan et al. 2005) and in-group favoritism (Hennessy and West 1999). Based on the theoretical basis and empirical support for the proposed relationship between functional identification and IFB, the first hypothesis of both models A and B follows:

H1A & B: Functional identification is positively related with the strength of negatively held stereotypes about persons of another function.

Organizational Identification, Moderation or Direct Effect

Organizational identification is the degree to which an employee's self-concept is based on their membership in an organization-wide group of employees (Albert and Whetten 1985; Sethi 2000). As reviewed previously, organizational identification is used prominently in functional identification research (Fisher, Maltz, and Jaworski 1997), and alone, organizational identification is related with positive organizational behavior, such as increased organizational satisfaction, improved organizational extra-role behavior, and decreased employee intent to leave (Abrams, Ando, and Hinkle 1998). For a more thorough review of organizational identification see Riketta and Dick (2005).

It is important to include organizational identification in functional identification research since "superordinate identity is a group-level concept that captures the extent to which team-based identity overrides the functional identities of members" (Sethi, Smith, and Park 2001, p 75). In the present study, consistent with recent research on functional identification,

organizational and functional identification are hypothesized both independently and interacting, rather than a single, relative measure of functional identification (Wieseke et al. 2012).

Model A frames organizational identification as having a moderating effect on the relationship between functional identification and intergroup bias. As a group-level identification in which functional identification is nested, organizational identification is able to act as a superordinate identity, attenuating the potential ill-effects of functional identification (Sethi 2000). Accordingly, the following is hypothesized for model A in the present study:

H2A: Organizational identification is expected to moderate the relationship between functional identification and interfunctional negative stereotyping strength, such that when an individual's organizational identification is low, the relationship will be strengthened; when an individual's organizational identification is high, it is expected that that the relationship will be weakened.

Model B alternatively considers the direct effect of organizational identification. This perspective is informed by the literature on the bias-reducing effects of superordinate identification (Paluck and Green 2009). Identification with the organization frames the organization as the in-group for the individual, and extra-organizational groups as out-groups. Thus, out-group derogation and intergroup bias forms inter-organizationally rather than inter-functionally. For this reason organizational identification is hypothesized in model B to have a direct effect on stereotyping strength between functional units as a variable that is wholly independent from functional identification.

H2B: Organizational identification is positively related with interfunctional stereotyping strength.

Personality Variable of Interest

The need for positive social identity can vary from employee to employee. The personality trait negative affect (NA) encompasses a broad array of potential negative conditions, including, potentially, increased need to seek positive social identity. NA, also known as negative affectivity, provides the most comprehensive assessment of one's tendency to "dwell on the negative side of themselves and the world" (Watson and Clark 1984, p. 465). NA "subsumes a broad range of negative mood states, including fear, anxiety, hostility, scorn, and disgust" (Watson, Clark, and Carey 1988, p. 347), and moderates the relationship between occupational embeddedness and job performance outcome variables (Ng and Feldman 2009). In model A, this suggests that the effects of functional identification on interfunctional stereotyping strength may be moderated by trait NA. When an employee is more prone to NA, they are more susceptible to using their functional identification as a source of positive social identity. Therefore, the relationship between functional identification and stereotyping strength is amplified.

H3A: NA is expected to moderate the relationship between functional identification and interfunctional negative stereotyping strength, such that when an individual is high in NA, the relationship will be strengthened; when an individual is low in NA, the relationship will be weakened.

NA has also been shown to positively correlate with counterproductive workplace behavior and organizational citizenship behavior (Dalal et al. 2012) and Low NA relates with greater information elaboration and decision quality in group-based decision making (van Knippenberg, Kooij-de Bode, and van Ginkel 2010). These studies support Model B, which positions NA as directly related with interfunctional stereotyping strength. Furthermore, Forgas (1995) suggests that "affect can prime the encoding, retrieval, and selective use of information in

the constructive processing of social judgments” (p. 44). This suggests that even without functional identification as a source of positive social identity, the trait NA plays a role in social judgments. This reflects a direct effect, as hypothesized:

H3B: NA is positively related with interfunctional stereotyping strength.

Conditions of Contact and Their Role in Interfunctional Bias

Managers of interfunctional workgroups encourage employees to interact more, with the hopes that barriers between groups will be reduced. However, when IFB reduction is sought, the literature shows that this contact will only be effective in reducing prejudice under certain conditions. Allport (1954) was the originator of the contact hypothesis, which is that “intergroup contact under *certain prerequisite conditions* promotes the development of more harmonious intergroup relations” (Gaertner et al. 1994, p 225; See also Dovidio, Gaertner, and Validzic 1998). Research on intergroup bias has refined these to four or five conditions through which intergroup bias can be reduced (Ben-Ari and Amir 1986; Cook 1978; Pettigrew 1998). From this core set of contact conditions, four are adapted in the present research for their relevance in the interfunctional context (Hung and Lin 2013). Specifically, equal status, cooperative interdependence, interpersonal interaction, and supportive norms comprise a comprehensive and concise collection of conditions of prejudice-reducing contact (Gaertner et al. 1994).

Equal status was originally developed in the racism literature as an assessment of socioeconomic equality (Amir 1969). In the IFB context, equal status is adapted to be a measure of function-based equality in the organization. This is akin to research on pay disparity and equality and their effects within companies (Cowherd and Levine 1992). The more equally two

disparate functional groups are treated in the organization, the less likely they will be to seek positive social identity from the other group.

Interpersonal interaction can be summarized as “opportunities for personal acquaintance between outgroup members” (Gaertner, Dovidio, and Bachman 1996, p. 272). The premise of this contact condition is that the more intimate the contact, the less individuals will categorize members of outgroups, thereby reducing or eliminating stereotyping and prejudice (Ben-Ari and Amir 1986). Interfunctional team-building approaches this contact condition, to the extent that the activities can provide opportunities for employees to interact on a personal level.

Cooperative interdependence recognizes that, in some situations, disparate groups rely on one another, and that cooperation is in the best interest of each group (Amir 1969). Studies have shown that when organizational or superordinate goals are absent, that intergroup antagonism is higher (Dodd 1935; Ram and Murphy 1952). Cooperative interdependence is thus an assessment of the extent to which the disparate groups need or rely on one another (Gaertner et al. 1994).

Finally, interfunctional *supportive norms*, or the social expectations to be unprejudiced, play a role in IFB. Supportive norms may originate from the decentralized structure of an organization, the culture of an organization (Deshpande and Webster 1989; Eng 2006), or from the management team (Devine and Markiewicz 1990).

As with organizational identification and NA, these conditions of contact are expected to attenuate the relationship between functional identification and IFB in model A.

H4A: Contact is expected to moderate the relationship between functional identification and interfunctional stereotyping strength, such that when (a) equal status, (b) interpersonal interaction, (c) cooperative interdependence and (d) supportive norms are low, the relationship

will be strengthened; when these dimensions of contact are high, it is expected that the relationship will be weakened.

Model B of IFB maintains that functional identification is not the sole antecedent of IFB, and that the 4 conditions of contact each directly relate to IFB. Stereotyping strength is, therefore influenced directly by functional identification, organizational identification, NA, and these conditions of contact.

H4B: Contact in the form of (a) equal status, (b) interpersonal interaction, (c) cooperative interdependence, and (d) supportive norms, is positively related with interfunctional stereotyping strength.

The Relationship between Interfunctional Stereotypes and Prejudice

Models A and B of IFB both frame interfunctional stereotyping as positively related with interfunctional prejudiced attitudes, as reviewed previously. Consider also that prejudice has previously been operationalized as the summation of stereotype belief strength and the evaluation of the stereotype (Dovidio et al. 1996). Although we depart from evaluating the stereotyping belief in favor of evaluating the out-group member in the measurement of prejudice in the present study, this operationalization provides further support for the positive relationship between stereotyping and prejudice. Furthermore, prejudice has been previously conceptualized and tested as a mediating variable, or the vehicle by which stereotyping beliefs become discriminatory behavior (Doob 1967). This is fundamental to the understanding of intergroup and IFB, that generalized beliefs about out-group members can lead to negative evaluations about those members, causing prejudice to form (Stangor 2009).

H5: Interfunctional stereotyping strength is positively related with interfunctional prejudiced attitude formation.

Internal Motivation to Respond without Prejudice

Socially transformative research on racism has led to the development of theories of motivation related to individuals' measured or observable level of prejudice. Emerging from this research, internal motivation to respond without prejudice (IMS) is individuals' moral compass and desire to be personally unprejudiced (Plant and Devine 2009). IMS has proven consistent in predicting lower biased behavior across different biases and social contexts (Butz and Plant 2009; Ratcliff et al. 2006), including reduced discrimination and improved intergroup circumstances (Butz and Plant 2009), and more attention paid to intergroup information, (Chen et al. 2014; Devine et al. 2002). IMS has also been shown to relate to low levels of prejudiced beliefs (Butz and Plant 2009; Plant and Devine 1998), suggesting that "participants whose motivation was deeply internalized responded with low levels of automatic negativity" (Butz and Plant 2009, p 1321).

It is unclear from the literature whether IMS operates through reducing stereotyping beliefs, or the evaluation of the out-group members, so both a moderating and direct effect are hypothesized. As described by Butz and Plant (2009), the negative evaluation of the stereotyping belief is reduced, suggesting that the stereotype is present, but that IMS attenuates its effects on prejudiced attitudes. However, the findings of Plant and Devine (2009) suggest, alternatively, that IMS operates independently from stereotyping, that regardless of stereotyping beliefs, prejudice is lower from those who are internally motivated to respond without prejudice.

Maintaining consistency in the two models of IFB, a moderating effect of IMS is hypothesized in model A, and a direct effect in model B.

H6A: One's IMS is expected to moderate the relationship between interfunctional stereotyping strength and interfunctional prejudice such that, when an individual's IMS is low, the relationship will be strengthened; when an individual's IMS is high, the relationship will be weakened.

H6B: One's IMS is negatively related with interfunctional prejudice.

Method

The bias that supply chain employees may hold toward sales employees was selected as the setting for this test of the competing models of IFB for two reasons. First, the functioning relationship between sales and supply chain employees is often tenuous, although it is important for the demand and supply functions of organizations to cooperate (Esper et al. 2010). Second, bias towards salespeople has not been studied intra-organizationally, although salesperson stereotypes exist and have been shown to influence customer perceptions and sales performance (Babin, Boles, and Darden 1995; Thompson 1972). Taken together, examining the influence that negative biases held by supply chain employees toward salespeople should provide an ideal setting for testing the competing models.

Tests of the competing antecedent models of IFB were performed using data sourced from a self-reported online questionnaire. Measures of belief strength (i.e., stereotype strength), attitudes (i.e., prejudice), self-identification, and NA were required for this critical test of theory. Multiple-item measures were adapted from a number of different sources in psychology and marketing to enable the measurement of these latent constructs. The questionnaire-based survey

method was utilized and preferred over other methods for its strength in psychographic measurement and in large-scale administration (Fowler Jr 2013). Furthermore, using on online survey administration made it possible to sample 221 supply chain employees from 142 different companies. The collected data was then analyzed for measurement validity and model fit using AMOS 20.

Sample

The sample for this study was obtained through two sources that enabled direct contact with supply chain employees. The first source was a list of individuals associated with a professional organization that is sponsored by a large, southeastern university. The professional organization organizes bi-annual forums for professional and academic presentations and discussions on the topics of supply chain management and distribution. The list supplied by the supply chain forum was filtered to include only practicing professionals who work in a supply chain function in their organization. Although these employees may have functional roles in various places in the supply chain, this study only requires that they work in a role that holds beliefs and perceptions of salespeople as an out-group function, not that participants are, themselves, in identical in-groups. The final list for this panel of participants included 2582 members. Of these, 2536 solicitation emails were sent to potential survey participants without error. This data collection effort resulted in 146 completed surveys, which is a response rate of 5.8%.

The second source of supply chain employee participants comprised members of three academic alumni groups, who were contacted through an online social networking website. These participants included alumni from both private and public institutions of higher education.

These participants were identified as being supply chain employees through their job titles posted on publicly accessible profiles. The total number of sampled supply chain employees contacted through this medium was 340. This recruiting effort supplied an additional 164 participants who completed the entire survey, with a response rate of 52.9%.

A total of 310 responses were collected from these two sources, with a total response rate of 11.6%. Of these responses, 78 were deemed unusable due to missing and erroneous data. Finally, 11 respondents were removed from the data based on their C-level rank in their organization. Preliminary screening of the study 1 dataset resulted in a usable sample of 221 responses, which included 51 women. This sample size above 200 participants is considered statistically powerful enough to produce trustworthy results (Garver and Mentzer 1999). Participants' average age was 42, with an average of 15 years of supply chain experience, and 9 years with their current employer. The organizational positions of these employees varied widely, with 40 reporting an employee status only, 20 employees with limited supervisory responsibilities, 11 supervisors, 58 mid-level managers, 28 upper-level managers, 45 directors, and 19 vice presidents (see table 1). Sixty-seven of the participants indicated that they had previous sales experience.

Participants also reported the area in the supply chain in which they work. This variable was collected using multiple response options in order to be exhaustive. Logistics employees made up the largest employee base in the sample with 59 participants. They were followed by 28 production and operations employees and 18 purchasing employees. Participants also indicated some combination of these, totaling 45 participants. The remaining 71 participants selected the "other" option which included one or more of the following: demand and S&OP planning, forecasting, quality control, process and project management, to name a few.

Table 1 – Organizational Positions of Sample

	Frequency	Percent	Cumulative Percent
Employee without supervisory responsibilities	40	18.1%	18.1%
Employee with supervisory responsibilities	20	9.0%	27.1%
Supervisor	11	5.0%	32.1%
Mid-level manager	58	26.2%	58.4%
Upper-level manager	28	12.7%	71%
Director	45	20.4%	91.4%
Vice President	19	8.6%	100%
Total	221	100%	

Measures

The measures used in this study of IFB were largely adapted from existing literature. The only exception is the measurement of stereotyping strength. Stereotyping strength was developed based on negative beliefs that supply chain professionals tend to hold about sales people. These beliefs were coded verbatim from exploratory interviews with supply chain professionals. The beliefs were shared freely in an open response, face-to-face setting, and an effort was made to preserve the exact wording of these interviewees. Due to the manifest and apparent nature of beliefs, exhaustive studies of the validity of these scale items a priori were not performed. However, using these explicit items as multiple-item measures, a broader range of negative beliefs than were observed in previous studies were captured.

A reporting of the endogenous measures used in this study can be found in table 2. Interfunctional stereotyping strength was measured using a 7-point agreement scale. An exploratory factor analysis using Varimax rotation provided insight into the nature of these 12 items. The 4 items that are worded positively, which were included to provide a valence balance of beliefs about salespeople, loaded on a second factor. The 8 negatively worded items exhibited acceptable loadings and inter-correlation, and resulted in acceptable convergent validity in a confirmatory factor analysis ($CR = .90$).

The attitudinal measure of prejudice was derived from bi-polar sentiments that have been expressed by supply chain employees about sales people. The aim of this construct is to understand the general positive or negative feelings of a participant toward supply chain employees. Accordingly, participants were asked to indicate their attitude toward salespeople in general on a seven-point scale and no other descriptions were provided except the polar terms. These terms included uncooperative vs. cooperative, objectionable vs. acceptable, bad vs. good,

Table 2 – Endogenous Variable Composite Reliability Scores and Item Path Weights

	Λ	CR
Interfunctional Stereotyping Strength		.90
SS1 - Sales people tend to present a very positive face of the organization to customers. [†]		
SS2 - Sales people tend to mislead others.	.70	
SS3 - In general, sales people effectively communicate with customers. [†]		
SS4 - Sales people are like the "cowboys" of the organization, out doing their own thing.	.73	
SS5 - The people in sales tend to act aggressively toward others.	.76	
SS6 - Sales people tend to keep others in the company at a distance.	.83	
SS7 - Sales people tend to feel like they are superior members of the organization.	.79	
SS8 - In general, sales people are enthusiastic and positive, even when faced with pressure. [†]		
SS9 - Sales people are usually considerate of others in their organization when they make sales.*		
SS10 - In general, sales people are ignorant about the company's operations.	.61	
SS11 - It seems like people in sales do not work as hard as other company employees.	.68	
SS12 - Sales people generally get paid more than they deserve.	.70	
Interfunctional Prejudice		.95
P1 - Bad:Good	.86	
P2 - Dislike:Like	.87	
P3 - Objectionable:Acceptable	.82	
P4 - Suspicious:Trustworthy	.72	
P5 - Hostile:Friendly	.76	
P6 - Dissatisfactory:Satisfactory	.86	
P7 - Uncooperative:Cooperative	.73	
P8 - Unfavorable:Favorable	.89	
P9 - Intolerable:Tolerable	.79	

*Item not retained due to poor validity; [†]Item not retained due to cross-loading in the model

CR = Composite Reliability

suspicious vs trustworthy, hostile vs. friendly, dissatisfactory vs. satisfactory, intolerable vs. tolerable, dislike vs. like, and unfavorable vs. favorable. The items are each adapted from a 100-item measure of prejudice, with only these 9 salesperson-relevant items used (Sedlacek and Brooks Jr 1970).

Functional identification was measured in keeping with recent research (Wieseke et al. 2012), in which identification is operationalized by measuring participants' sensitivities to praise and criticism of their functional work group. Specifically, participants were asked "the extent to which [they] agree or disagree with the following statements about *[their] functional work group*." The statements included items such as: When someone criticizes the colleagues in my functional work group, it feels like a personal insult and my colleagues successes are my successes. A full reporting of exogenous variables used in the study are found in table 3.

The measure of organizational identification was also adapted for this study from (Wieseke et al. 2012). This measure is worded identically to functional identification except that references to the functional workgroup are replaced with references to this company or my company. These items reflect the extent to which participants self-identify with their organization.

The NA measures were adapted for use in this study from the Negative Affect Schedule – Short Form (aka PANAS), which has been shown to hold acceptable correlation levels with longer forms of the measurement of NA (Thompson 2007). For measuring the *trait* of NA, rather than the state, the following wording was presented to participants: "Please use this list of feelings to describe yourself as accurately as possible. Describe yourself as you see yourself at the present time, not as you wish to be in the future. Describe yourself as you are generally or typically, as compared with other persons you know of the same gender and of roughly your

same age.” This measure’s introduction frames the scale as a long-term and enduring self-assessment of one’s affect. The measure proceeds with the following stem: “Thinking about yourself and how you normally feel, to what extent do you generally feel...?” The list of feelings for NA are 1) upset; 2) hostile; 3) ashamed; 4) nervous; and 5) afraid. A 7-point scale was used, with scale points from “never” to “always”.

The conditions of contact measures were adapted from Gaertner and his colleagues (Gaertner et al. 1994). The original intent of the measures in their study was the examination of racism within a multicultural high school. Accordingly, the items for equal status required a change from the mention of “teachers’ equal treatment of students” to “supervisors’ and managers’ equal treatment of employees.” Likewise, supportive norms controlled by “principals and teachers” required a change to “supervisors and managers.” In all, 19 items were adapted for use in the corporate organizational context and each was measured using a 7-point agreement scale. See table 3 for a complete list of the items used to measure equal status, interpersonal interaction, cooperative interdependence, and supportive norms.

Finally, the IMS measure was adapted from the intergroup bias literature (Plant and Devine 1998). The measures were originally written to measure racial prejudice, specifically, toward black people. Therefore, race was eliminated from the items used in this study. For example, the first item was originally written as “I attempt to act in non-prejudiced ways toward Black people because it is personally important to me” (Plant and Devine 1998, p. 830). Once adapted, the new item stated: 1) I attempt to act in non-prejudiced ways because it is personally important to me. A seven-point agreement scale was also used to measure this variable.

Table 3 – Exogenous Variable Item Path Weights and Composite Reliability Scores

	Λ	CR
Functional Identification		.79
FI1 - When someone criticizes the colleagues in my functional work group, it feels like a personal insult. [†]		
FI2 - I am very interested in what others think about the colleagues in my functional work group. [†]		
FI3 - When I talk about the colleagues in my functional work group, I usually say “we” rather than “they.”	.68	
FI4 - My colleagues’ successes are my successes.	.78	
FI5 - When someone praises the colleagues in my functional work group, it feels like a personal compliment.	.77	
FI6 - If a story in the media criticized the colleagues in my functional work group, I would feel embarrassed. [†]		
Organizational Identification		.77
OI1 – When someone criticizes my company, it feels like a personal insult.*		
OI2 - I am very interested in what others think about my company.	.68	
OI3 - When I talk about my company, I usually say “we” rather than “they.” [†]		
OI4 - This company’s successes are my successes.	.83	
OI5 - When someone praises this company, it feels like a personal compliment.	.66	
OI6 - If a story in the media criticized my company, I would feel embarrassed.*		
Trait Negative Affect		.80
NA1 – Upset [†]		
NA2 – Hostile*		
NA4 – Ashamed	.64	
NA6 – Nervous	.70	
NA9 – Afraid	.90	
Equal Status		.82
ES1 - Managers in this organization are fair to both sales people and supply chain employees alike.	.83	
ES2 - All employees of this organization are treated equally.	.67	
ES3 - Managers at this organization pay attention to both sales people and supply chain employees.	.77	
ES4 - I don’t know of any functional unit that gets special treatment in this organization.	.61	
Interpersonal Interaction		.68
II1 - I talk to employees from different functions only when I have to.	.71	
II2 - My co-workers would think badly of me if I spent time with employees from other functions.*		
II3 - I often go through a whole work day and never say more than a few words to an employee from a different function.	.72	

Table 3 (continued) – Exogenous Variable Item Path Weights and Composite Reliability Scores

	Λ	CR
Cooperative Interdependence		.70
CI1 - The sales people and supply chain employees in this organization need each other.	.77	
CI2 - The sales people and supply chain employees have important things to offer each other.	.64	
CI3 - After sales people and supply chain employees get to know each other, they find they have a lot in common.*		
CI4 - Sales people and supply chain employees are better off when they work together than when they stay away from each other.	.57	
CI5 - Sales people and supply chain employees at my organization are all working together for the same things.*		
CI6 - Employees in this organization think it's good to get to know other employees from other functions.*		
Supportive Norms		.85
SN1 - The managers in my organization encourage employees to make friends with employees in other functions.	.92	
SN2 - The first-level supervisors in my organization encourage employees to make friends with employees in other functions.	.80	
SN3 - The managers generally think that all of the employees should be friends.	.58	
SN4 - Supervisors here like for employees from different functional units to understand each other.†		
SN5 - The supervisors in this organization generally like for employees from different functions to get along.†		
SN6 - This is an organization in which everybody is encouraged to be friends.	.75	
Internal Motivation to Respond Without Prejudice		.84
IM1 - I attempt to act in non-prejudiced ways toward others because it is personally important to me.	.60	
IM2 - According to my personal values, using stereotypes about other people is okay.	.79	
IM3 - I am personally motivated by my beliefs to be non-prejudiced toward others.	.71	
IM4 - Because of my personal values, I believe that using stereotypes about other people is wrong.	.66	
IM5 - Being non-prejudiced toward others is important to my self-concept.	.80	

*Item not retained due to poor validity; †Item not retained due to cross-loading in the model
CR = Composite Reliability

Testing for Normality and Initial Model Fit

The data were tested for normality, including skewness and kurtosis. Each manifest variable was analyzed and several variables were found to be abnormally distributed. First, three measures of functional identification and three measures of organizational identification were found to be kurtotic. These data were transformed using the exponential function and resulted in acceptably normal distributions (Box and Cox 1964). The same transformation was also applied to two measures of cooperative interdependence, one measure of supportive norms, one measure of interpersonal interaction, and five IMS measures. In addition, a logarithmic transformation was performed with two indicators of NA and one indicator of interpersonal interaction to improve their distributions.

In every case, the abnormality of the data is understandable, given the sensitive content of the questions. Consider, for example, participants' desire to appear unprejudiced, or the negative stigma associated with the tendency to have NA. Some researchers have suggested that social science research is often not normally distributed (Barnes et al. 2001), but that maximum likelihood estimation is robust to the challenge of non-normally distributed data (Diamantopoulos 2000). The refined and valid constructs in the final structural models, yet to be reported, exhibit acceptable levels of normality, with half of the constructs maintaining skewness below 3 times the standard error of the skewness, and the other half being no more than 3.8 times the standard error. As well, all of the final constructs exhibit low kurtosis, below 3 times the standard error of kurtosis, with the sole exception exhibiting only 3.4 times the standard error. These exceptions to normality present a minor limitation to the study.

A measurement model was then constructed in AMOS to test the goodness of fit between all measured items and their latent constructs, as well as the correlation between the latent

constructs. The initial fit indices of the confirmatory factor analysis (CFA) indicated that some further analysis and remediation was required, in order to arrive at an acceptable level of fit (CMIN = 2898.99; DF = 1784; CFI = .841; RMSEA = .053).

Measuring Functional and Organizational Identification

The first challenge to model fit was evident in cross-loading between the error terms of similarly worded items of functional and organizational identification. It is noteworthy that Wieseke et al. (2012), using identical items, did not experience this problem. Two explanations can be offered for this challenge. First, the use of “my” in the items may have made them overly personal to the participants, causing functional versus organizational identification to become undifferentiated. Second, the participant’s responses may accurately depict areas of identification where participants do not vary. In other words, regardless of identification, participants are likely to feel insulted when criticized, if even just due to casual association. With either explanation, removal of these items with correlated error is necessary. The integrity of each construct was maintained by retaining items with high inter-item correlation between the constructs. This resulted in the removal of three items of functional identification and one of organizational identification.

Other Exogenous Measures

Refinement of the measurement model proceeded using the modification indices to detect more unintended relationships in the model. There were several instances of error cross-loading in the contact conditions. This is not surprising given that several of these conditions work similarly toward reducing bias. As well, all of the items for the four contact conditions were presented together in the survey instrument, and presented to participants at random. Two items

in the supportive norms construct were removed due to high error cross-loading. Similarly, an unexpected correlation between the error of an NA item, “Upset” and an IMS warranted the deletion of one of the items, and in this case the NA item was deleted.

Finally, several error terms of inter-construct indicators were shown to correlate, and were thus correlated in the measurement model. Ultimately, two correlational paths were drawn within the prejudice construct and one was drawn for stereotyping strength, supportive norms, equal status, and IMS, each. By the end of this and the other fit procedures, the measurement model fit improved (CMIN = 1597.69; DF = 1219; CFI = .936; RMSEA = .038).

Convergent and Discriminant Validity

Convergent validity was assessed using composite reliability (CR) and average variance extracted (AVE) values for each latent construct. The first construct addressed in this analysis was the cooperative interdependence contact condition. Based on a CR below .7 and AVE below .5, a factor analysis of the items was performed using Varimax rotation. This resulted in the extraction of two different factors, each with eigenvalues greater than 1, with cross-loading no greater than .312. Of the six items in this construct, three appeared to be belief or impression based (Items 1, 2, and 4; e.g. “The salespeople and supply chain employees have important things to offer each other.”) while the other three were less abstract and more behavior-based (Items 3, 5, and 6; e.g. “After sales people and supply chain employees get to know each other, they find they have a lot in common.”). In an attempt to retain all of this data, the construct was split into two and the resulting constructs were again tested for CR and AVE. However, only one of the two resulting constructs exhibited acceptable reliability (CR = .70) and was retained (Items 1, 2, and 4).

Stereotyping strength, interpersonal interaction, NA, and organizational identification also required items with poor convergence to be removed, as noted with an asterisk in table 3. Convergent validity was met for all but two of the contact constructs, with interpersonal interdependence exhibiting low reliability (CR = .68) and cooperative interdependence, low AVE (AVE = .45). Beyond these two points of concern, convergent validity values were at acceptable levels for the other latent constructs. As well, tests of discriminant validity between all of the constructs were within acceptable levels. Specifically, the square root of the AVEs for each construct was greater than the construct's correlation to the other constructs. This is true even despite the high correlation between functional identification and organizational identification ($r = .72$), and stereotyping strength and equal status ($r = -.71$).

The culmination of the confirmatory factor analysis procedures undertaken in this study resulted in a measurement model with acceptable fit (CMIN = 1061.32; DF = 851; CFI = .959; RMSEA = .034) and discriminant validity, with largely acceptable convergent validity. The statistics that reflect this can be found in table 4.

Common Method Bias

Due to the nature of self-reported data, a test of common method bias was undertaken, using the common latent factor (CLF) technique (Podsakoff et al. 2003). However, a unique challenge prohibited the use of this preferred technique, and required that the path weights be constrained to a common value of calculated variance. Podsakoff et al. (2003) advocates this approach when an uncorrelated marker variable is not available and when the measurement model becomes under-identified due to the addition of common latent factor paths. In this case the unconstrained CLF model was not under-identified, but resulted in a covariance matrix that

Table 4 – Correlation Matrix with Square Root of AVE on the Diagonal, and Reporting of AVE, MSV, and CR for Each Construct in the Measurement Model

	CR	AVE	MSV	1	2	3	4	5	6	7	8	9	10
1 Prejudice	.95	.66	.18	.81									
2 Organizational Identification	.77	.53	.52	-.29***	.73								
3 Functional Identification	.79	.56	.52	-.22**	.72***	.75							
4 Stereotyping Strength	.90	.53	.50	.41***	-.43***	-.18*	.73						
5 Trait Negative Affect	.79	.57	.15	.32***	-.15	-.12	.24**	.75					
6 Supportive Norms	.85	.59	.17	-.20**	.22**	.22**	-.18*	.00	.77				
7 Cooperative Interdependence	.70	.45	.23	-.31***	.30***	.40***	-.30***	-.02	.30***	.67			
8 Equal Status	.82	.53	.50	-.42***	.53***	.28***	-.71***	-.15	.42***	.48***	.73		
9 Interpersonal Interaction	.68	.51	.23	-.35***	.35***	.22*	-.42***	-.21*	.23**	.46***	.48***	.72	
10 Motivation for Non-prejudice	.84	.51	.15	-.28***	.30***	.28***	-.24**	-.38***	-.10	.30***	.24**	-.26**	.72

* $p < .05$; ** $p < .01$; *** $p < .001$

CR = Composite Reliability; AVE = Average Variance Extracted; MSV = Mean Shared Variance

was “not positive definite.” This was attributable to the violation of the requirement that the CLF be uncorrelated with the other latent variables in the model. On the contrary, the CLF was calculated as a reflection of what is common between stereotype strength, equal status, and prejudice, rather than the entire model. This appears to be a flaw in using a common latent factor to estimate common variance: The CLF indicator weights cannot produce an objective assessment of common variance without a bias toward highly correlated latent constructs that overwhelm the rest of the model.

In order to validate this, half of the indicators for stereotyping strength were removed from the model, in an effort to reduce the bias of the CLF estimation toward a factor based on stereotyping strength. As expected, this model resulted in a covariance matrix that was positive definite. The path weights from this model were then compared with the path weights from a CLF-free model and very little difference was found ($RMD = .017$), with the path weights differing no more than .11 between the models. This alone was verification that common variance, including common method bias, is minimal in this dataset. In order to further validate this claim, the omitted stereotyping strength indicators were again included in the measurement model and the CLF path weights were then constrained to be equal, as a means of forcing them to evenly measure variance that is common across the entire model. This resulted in unstandardized path weights of .06 and common variance below 1 percent. With the finalizing of the measurement model and the test of common method bias reported, a critical test of theory will now be presented.

Results

Hypothesis tests for models A and B were undertaken with structural equation modeling (SEM) using AMOS 20 statistical software. The measurement model was modified into a structural model with hypothesized relationships between functional identification and interfunctional stereotyping strength, and other variables, relevant to each model. For model A, this included 6 moderating variables and their interactions. For model B, only the variables and their direct paths were retained. As well, the relationship between interfunctional stereotyping strength and interfunctional prejudice, and this relationship's other moderator were also tested. A full reporting of the results of the path analysis is provided in Table 5. The results for each model will now be reported.

Model A

The sole antecedent of interfunctional stereotyping strength in model A is functional identification. A positive relationship between functional identification and interfunctional stereotyping strength was hypothesized in H1A. This hypothesis is supported, with functional identification positively related with stereotyping strength ($\Gamma = .141, p < .05$). Moderators of this relationship were hypothesized to either attenuate or amplify this relationship. Support for hypothesis H2A was also found, with organizational identification attenuating the positive relationship between functional identification and interfunctional stereotyping strength ($\Gamma = -.12, p < .05$). However, NA (H3A) was not found to amplify the antecedent relationship as hypothesized ($\Gamma = -.01, p > .05$). The remaining moderating variables were hypothesized to have an attenuating relationship. Support was not found for three of the conditions of contact variables (H4A), including: (a) equal status ($\Gamma = .09, p > .05$), (b) interpersonal interaction ($\Gamma =$

Table 5 – Results of Hypothesis Testing Via Structural Model Path Analysis

	Model A	Model B
Direct Effects → Stereotyping Strength		
Functional identification	.141*	.086
Organizational identification	-.154*	-.17**
NA	.154*	.153*
Equal status	-.646***	-.649***
Interpersonal interaction	-.127†	-.129†
Cooperative interdependence	-.044	-.044
Supportive norms	.08	.08
Interactions (Model A)		
Functional identification x organizational identification	-.12*	
Functional identification x trait negative affect	-.012	
Functional identification x equal status	.088	
Functional identification x interpersonal interaction	.022	
Functional identification x cooperative interdependence	-.111*	
Functional identification x supportive norms	.016	
	(R ² = .54)	(R ² = .51)
Direct Effects → Prejudice		
Stereotyping strength	.39***	.377***
IMS	-.188**	-.193**
Interaction (Model A)		
Stereotyping strength x internal motivation to respond without prejudice	-.103	
	(R ² = .20)	(R ² = .18)
Fit Indices		
CMIN/df	1.869	1.579
CFI	.814	.899
RMSEA	.063	.051

† $p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$

.02, $p > .05$), and (d) supportive norms ($\Gamma = .02$, $p > .05$). Support for H4A(c) was found, indicating that cooperative interdependence attenuates the relationship between functional identification and interfunctional stereotyping strength ($\Gamma = -.11$, $p < .05$). Combined, the antecedent and moderating variables account for over half of the variance found in interfunctional stereotyping strength ($R^2 = .54$).

The second hypothesized direct relationship in model A is between interfunctional stereotyping strength and interfunctional prejudice. This hypothesis (H5A) was supported by the data ($\beta = .39$, $p < .001$). In addition, one's IMS is hypothesized to attenuate the relationship between interfunctional stereotyping strength and interfunctional prejudice. Support for this sixth hypothesis was not found in model A ($\beta = -.10$, $p > .05$), although a strong direct effect of IMS contributed to a modest coefficient of determination for interfunctional prejudice ($R^2 = .20$).

Overall, hypothesis tests of model A resulted in support for three and partial support for one of the six hypothesized relationships in the model. The structural model exhibited weak model fit, however, as the interaction terms exhibited high correlations with other interaction terms (CMIN/df = 1.869, CFI = .814, RMSEA = .063). This was the case despite following the practice of mean-centering the variables before multiplying them to create the interaction variable.

Model B

Model B approaches the study of antecedents of stereotyping strength using direct paths, without moderating variables. Hypothesis H1B maintains the importance of functional identification as an antecedent of stereotyping strength. The results, however, suggested that functional identification does not relate with stereotyping strength, when holding the other

antecedents constant ($\Gamma = .09, p > .05$). On the other hand, H2B was supported, with organizational identification relating negatively with stereotyping strength ($\Gamma = -.17, p < .01$). NA is also related with stereotyping strength, but positively, supporting hypothesis H3B ($\Gamma = .15, p < .05$).

Equal status resulted in the highest level of determinable variance among the other variables relating to stereotyping strength in model B. As hypothesized (H4Ba), equal status was negatively related with stereotyping strength ($\Gamma = -.65, p < .001$). The interpersonal interaction contact variable was also hypothesized (H4Bb) to relate negatively with stereotyping strength, and this relationship was supported, however, at a level of confidence that only approaches conventional significance ($\Gamma = .129, p < .1$). Neither cooperative interdependence nor supportive norms were found to relate with interfunctional stereotyping strength, and both hypotheses H4Bc and H4Bd are not supported, respectively ($\Gamma = -.04, p > .05$; $\Gamma = .08, p > .05$).

Finally, tests of the antecedents of interfunctional prejudice were modeled along with the other variable already presented. Interfunctional stereotyping strength was hypothesized (H5B) to relate positively with interfunctional prejudice. Support for this relationship was found ($\Gamma = .38, p < .001$). In addition, the direct relationship between IMS and interfunctional prejudice were hypothesized (H6B), and support of this negative relationship was also found ($\Gamma = -.19, p < .01$). The structural model for the test of model B exhibited moderately good fit (CMIN/df = 1.579, CFI = .899, RMSEA = .051).

Model Comparison

The data supports parts of both theories hypothesized in this study. Specifically, tests of model A found support for both of the direct relationships hypothesized, and three of the seven

hypothesized interactions. Support for model B included direct paths for five of the nine hypothesized relationships, and one path that approached significance, at $p < .1$. Comparison of these models, however, requires an assessment of the goodness of fit, or how well the data fits either hypothesized structural model. Comparing the fit indices in table 5, we see that model B is a significantly better fitting model than model A ($X^2(322) = 858.50, p < .05$).

Discussion

The findings in this study provide managerially-relevant insights into the variables that influence IFB between functional workgroups within corporate organizations. The data suggests that organizational identification is negatively related with interfunctional stereotyping strength between functional workgroups. This supports research previously conducted on the role of identification in interfunctional communication behaviors (Fisher, Maltz, and Jaworski 1997) and headquarter stereotypes of salespeople (Wieseke et al. 2012). As Sethi (2000) proposed, a superordinate identity, such as organizational identification, can overcome the adverse effects of IFB from functional identities “by creating a new team-based identity” (p. 332). This appears to be the case with this data, despite the lack of support for the influence of functional identification on interfunctional stereotyping strength. This may be an artifact of the scales of functional and organizational identification used in this research. The existence of alternative in-groups, rather than function-based in-groups, from which IFB may spawn is also plausible. Whatever the source of interfunctional stereotyping strength, organizational identification appears to be a force for reducing this form of intergroup bias. Getting employees to feel like they are on the same team through shaping a familial culture, cross-functional training, or socializing activities should advance superordinate identification and interfunctional cooperation. In addition to interpersonal

interaction, as just mentioned but not yet discussed, real or perceived favoritism toward any groups in the organization, in the form of unequal status, will undermine efforts to foster superordinate organizational identification. This is supported in the model.

The most influential variable in the model is the equal status condition of contact. Explaining more than a third of the variance of stereotyping strength, equal status is a major, but not surprising finding in this study. This finding supports the literature on employee equity in the management literature. The literature on pay equity supports the notion that employees are more cooperative when pay disparities are small between a group of authoritative employees and a group of subordinate employees (Cowherd and Levine 1992). The managerial implication for this finding is that managers should do what is necessary to help employees at all levels of the organization to feel as though there is equity in the pay and treatment between different functions. If improved interfunctional cooperation is desired, no employees in an organization should feel less important or valued, or as though other employees receive more tangible or intangible benefits or perks than they do.

In support of the hypothesized relationship, interpersonal interaction is negatively related with stereotyping strength in this study, both in the structural model, and when examined alone in a bivariate correlational analysis ($r = -.42, p < .001$). This suggests that within corporate organizations, those employees whose social circle extend beyond their functional sphere tend to hold less IFB toward others in the company. However, caution about the causal direction of this condition of contact should be taken as it is reasonable to suggest that unbiased employees should tend to interact interpersonally more, simply because they tend to hold weaker stereotypes about others, if any are held at all. Considering the NA variable alongside of interpersonal interaction, it may be more than conjecture to suggest that employees who have more NA likely

interact less interpersonally with others than those who aren't prone to NA. The bivariate correlation between interpersonal interaction and NA support this idea ($r = -.21, p < .05$).

NA exhibited a positive relationship with stereotyping strength in the structural model, as hypothesized. In addition, besides the negative correlation that it has with interpersonal interaction, NA is also negatively correlated with IMS ($r = -.38, p < .001$). These findings suggest that hiring managers should implement personality trait measures in their hiring practices, especially when hiring for positions where interpersonal interaction and interfunctional cooperation are desirable. When these are undesirable or are not needed, negative feelings may have only minimal or even no impact on employees' performance. In this study, the negative feelings consisted of fear, shame, and nervousness.

Interfunctional stereotyping strength and IMS were each shown to relate with interfunctional prejudice in this study, as hypothesized in model B. The connection between beliefs and attitudes is confirmed in this finding, and indeed, holding negative beliefs more strongly does correlate with holding negative attitudes toward employees in other functions ($\beta = .41, p < .001$). Future research would do well to take the study of IFB further and examine the relationship between prejudicial attitudes and interfunctional behaviors in corporate organizations, as this relationship is supported in contexts outside of business. At present, it should be sufficient to say that managers of interfunctional workgroups who seek to improve interfunctional cooperation should take stock of the attitudes held between members of the functions and seek ways to reduce stereotyping beliefs in an effort to quell negative attitudes.

IMS was demonstrated to negatively relate with interfunctional prejudice, suggesting that employees who have this internal compass and motivation are ideal for work placement that involves interfunctional cooperation. Although this is perhaps easier said than done, another

consideration in this hiring recommendation may be found in the correlation between IMS and NA. NA is negatively correlated with IMS ($r = -.38, p < .001$), and so hiring based on employees' propensity to negativity is a recommendation that is maintained here. Both of these individual-level variables help to explain the variance in IFB and should be taken into consideration by hiring managers and managers assigning interfunctional workloads.

Going beyond the specific implications of the findings of the study, several theoretical and strategic implications should be discussed. First, IFB is validated as a viable theoretical basis on which to perform future research on interfunctional and cross-functional cooperation. This implies that any organizational research in which salient groups are present should consider and potentially control for the effects of stereotyping and prejudice. Future research will need to examine how interfunctional prejudicial attitudes influence behaviors and disrupt cooperation. The extant literature on attitudinal research strongly suggests that there will be a relationship between these interfunctional attitudes and interfunctional cooperation.

Second, managers are cautioned against ignoring the potential for bias between functional workgroups, and other salient groups when structuring organizations and allocating work that extends to other functions. The understanding that simply partitioning people into groups can lead to negative stereotypes is daunting, but this research provides guidance for how to overcome these natural and pervasive tendencies. The potential still exists for groups to form and spawn intergroup bias when cross-functional teams are created and designed, specifically, to eliminate barriers to cooperation. Unless these cross-functional teams feel a sense of equal status, have opportunity to communicate on interpersonal, meaningful levels, and if a sense-of-team or superordinate identity are not achieved, bias-based barriers to cooperation will likely persist.

Third, the performance implications of this study are dependent on the importance of interfunctional cooperation in the organization. An axiom of this study has been that interfunctional cooperation is desirable and contributes to the efficiency and/or effectiveness of the corporate organization. It should be acknowledged, however, that competition, not cooperation, is sometimes desirable in interfunctional workgroups. What is not desirable, however, is detracting or destructive beliefs or attitudes. So, even without the explicit desire for interfunctional cooperation, the findings in this study might still be beneficial to managers who need to reduce disruptive tensions or conflict among employees.

Limitations and Conclusion

As is any single-method empirical study, this study is limited by the weaknesses of the method. Specifically, the self-reported survey method allows for little control over participants during data collection and is potentially subject to common method, non-response, and measurement bias. The lack of control and non-response bias remain a limitation of the present study, with the former likely contributing to additional potential error in the analysis, and the latter being an ongoing concern in the interpretation of the results. To address non-response bias, the data were collected by sending an initial email, followed by two waves of reminder emails, spaced about a week apart. While it is impossible to know whether or not even more reminders would have drawn out even *later* responders, an examination of early wave and late wave responders suggests, at the very least, that the data is void of late-response bias. Unfortunately, a more pure check of non-response bias, through contact with non-responders, was not feasible. Again, this is a limitation of the study.

Despite decades of research on interfunctional cooperation, challenges persist. The pervasive human tendency to hold intergroup bias has been used to develop and test competing theories of IFB. Data collected from 221 supply chain employees from various companies were used to test two competing models. The model of direct effect antecedents of IFB fit the data best, suggesting that individual and intergroup antecedents of IFB have a direct effect on the phenomenon. Interfunctional stereotyping beliefs were shown to positively relate with NA at the individual level, and negatively relate with interpersonal interaction and equal status at the intergroup level. As well, interfunctional stereotyping beliefs and individuals' motivation to respond without prejudice were related with interfunctional prejudicial attitudes.

Both theoretical and managerial implications were derived and reported from these findings. Of note among these is the development of IFB as an inhibitor of interfunctional cooperation, and the empirical examination of the antecedents of IFB. As well, managers are directed to ensure that there is real or a perceived sense equal status between the groups that are being asked to work interfunctionally. Interpersonal interaction may be a means of reducing interfunctional stereotyping, if managers are able to bring members of different functions together and have them interact in a meaningful way. Also influential in interfunctional stereotyping is the individual employee and their propensity to have negative feelings. Hiring managers might consider that, although contrarian employees may be good for diversity of thought or innovation, they may hinder interfunctional cooperation efforts. Finally, and related to the previous point, individuals who are high in IMS are able to quell the natural tendency to judge others based on their group association. Employees with this internal motivation should be sought after to fill roles in interfunctional workgroups.

Chapter 5 – Essay 2

Abstract

Interfunctional bias inhibits cooperation between functional workgroups within corporate organizations. As employees of one function hold general, negative beliefs about members of another function (e.g. stereotypes), prejudiced attitudes and discriminatory behaviors may follow. A model of interfunctional bias is developed and hypothesized, which depicts the direct relationships between interfunctional negative stereotyping strength, prejudice, and discriminatory behavioral intentions. Three moderators, internal motivation to respond without prejudice and two external motivators to reduce prejudice (i.e., monetary incentives and social norms), are also considered. The first of two experiments revealed the predicted 3-way interaction where interfunctional stereotyping strength was positively related with prejudice toward the other function, but only when employees were not monetarily incentivized to work cooperatively and when they have low internal motivation to respond without prejudice. The hypothesized relationships between prejudiced attitudes and interfunctional behavioral intentions of information sharing, request fulfillment, and adversarial treatment were also supported in the results. The second study employing social norms as the external motivator also found the predicted 3-way interaction and the same relationships between prejudice and the behavioral factors tested. There was one unexpected finding within the 3-way interaction in study 2. Testing for the significance of slopes revealed a positive relationship between interfunctional stereotyping strength and prejudice for employees high in internal motivation to respond without prejudice and when a social norm to be non-prejudiced is in place. All the findings, their implications for theory and managers, and future research are each discussed.

Introduction

Cooperation between functional units within organizations is an often sought, yet underachieved goal in many companies (Esper et al. 2010). The challenge of eliciting cooperative attitudes and behaviors between disparate groups within corporate organizations has been examined from a number of different theoretical and practical positions over the past several decades (Luo, Slotegraaf, and Pan 2006; Sethi 2000). However, challenges in interfunctional cooperation persist. For example, in a study of marketing and R&D functions, only a small portion of mid-level managers would view the relationship between these functions as collegial (Kotler, Wolcott, and Chandrasekhar 2009). Keaveney (2008) provides evidence of the ongoing struggles of interfunctional cooperation, through a qualitative analysis of the pervasive negative beliefs that marketing and engineering functional workgroups have toward each other. Even basic business processes, such as sales and operations planning, which require interfunctional cooperation, are reported to be an ongoing challenge in most global organizations (Iyengar and Gupta 2013).

The extant literature on interfunctional cooperation largely approaches this challenge from a tactical viewpoint, examining training and reward systems (Cadogan et al. 2005), information sharing (Troy, Hirunyawipada, and Paswan 2008), and integrated goals (Fisher, Maltz, and Jaworski 1997), to name a few. These approaches have largely been shown to positively relate with increased cooperation and performance, or to moderate such relationships.

In the present study, interfunctional bias is proposed as a unifying theory, by which the previous studies in interfunctional cooperation might be better understood. The psychological basis of interfunctional bias is intergroup bias, which is defined as a natural tendency to favor ones' own in-group over out-groups and their members (Tajfel 1970). An in-group is any real or

imagined person or people with whom someone has a perceived similarity, whether real or imagined (Brewer 1993). This amply applies to intra-organizational functions as “such preference for the orientation of one's own functional area over others' creates and sustains interfunctional biases and stereotypes” (Sethi 2000, p 332). A model of interfunctional bias, will be hypothesized and examined at the belief, attitudinal, and behavioral levels. In both intergroup and interfunctional bias, these levels are known as stereotypes, prejudice, and discrimination, respectively. Although interfunctional stereotyping, which is the *belief* domain of interfunctional bias, has been shown to influence cross-function cooperation and sales performance (Wieseke et al. 2012), the *attitudes* and *behaviors* directly related to interfunctional stereotyping have not been researched previously. A review of the literature on intergroup and interfunctional bias, including hypothesis generation and model development, will be provided next.

The Psychological Basis for Interfunctional Bias

A rich body of knowledge on intergroup bias exists in the discipline of social psychology (Hewstone, Rubin, and Willis 2002). At its core, intergroup bias is the favoring of one's own in-group over another group, or in-group members over out-group members (Tajfel 1978). Controlled experiments have shown that participants who have a very arbitrary perceived similarity with others who they are merely told exist, tend to favor the imagined similar others in reward-allocating tasks (Tajfel et al. 1971). Functional workgroups are social groups that employees are likely to consider their in-groups (Sethi 2000). Subsequently, other groups in the organization are likely their out-groups (Keaveney 2008). Thus, the corporate organization is a context where the theory of intergroup bias can be adopted. Several principles guide the theory

of intergroup bias, including bounded cognitive capacity, social group formation, and the need for positive social identity. A review of these should be instructive.

Bounded Cognitive Capacity

Humans' mental capability is limited by the capacity of the mind to store and retrieve information when needed (Tulving and Osler 1968). The bounds of cognitive capacity suggest that humans have fallible memories and a limited capacity to recall information (Hart 1965). The process of categorization is a naturally occurring phenomenon in human cognition that permits information storage in a systematic way and aids in storage and recall (Rönnerberg, Nilsson, and Ohlsson 1982). Through categorization each familiar and recognizable stimulus that can be perceived by the senses can be quickly understood (Macrae and Bodenhausen 2000). The meanings of things that are unfamiliar, then, are derived from associations with things that are familiar (Heidbreder 1945). For example, in seeing a new product for the first time, consumers tend to categorize the product based on their pre-formed associative network, and form initial opinions about the product based on those associations (Viswanathan and Childers 1999).

Interpersonal categorization occurs even when two people have not met for the first time (Macrae and Bodenhausen 2000). Any information provided about the other person is used, as the mind attempts to *make sense* of the person by using its associative network and by categorizing the other person (Cantor and Mischel 1977). This naturally occurring phenomenon can be quite accurate and therefore useful, or terribly inaccurate and misleading. Coming upon a stranger in a dark alley who is dressed in black leather and has a bushy beard may or may not be a threat to the perceiver, although some things about the man's appearance may signal that he is

a threat for some people. If the categorization of this stranger as a threat is correct, the perceiver would be appropriate in walking as far away from that person as possible or running out of the alley. However, if the categorization is inaccurate, such behavior might be considered inappropriate and offensive. Categorizing others is a natural result of bounded cognitive capacity, however, it is imperfect and can result in social misconduct (Dovidio and Gaertner 1986).

Within corporate organizations, employees of disparate functions possess associative networks that include associations for employees from other functions. The representative image in employees' minds of what is a salesperson or an engineer, an accountant or a purchaser, is called the category exemplar or the prototype of the category (Cantor and Mischel 1977). Research has demonstrated the existence of these prototypes in studies on interfunctional cooperation (Keaveney 2008) and intergroup bias between groups in a medical practice (Hennessy and West 1999). As an illustration, consider the supply chain employee who is asked to work interfunctionally with a sales employee. Even just knowing that a salesperson will be involved triggers certain beliefs and attitudes, based on held knowledge about and previous experience with salespeople. Notice that this illustration depicts an impending interpersonal interaction. The stereotyping and potential prejudice of the supply chain employee, however, is based on the group membership of the other employee, as a member of a group of salespeople. Thus, interfunctional prototypes can be based on the group-level associations in one's associative network as opposed to specific interpersonal knowledge about an individual.

Social Group Formation

Social group formation can be based on tangible differences between people, such as their appearance, age, gender, or even preferences or tastes. However, group formation can also spawn from intangible or simply perceived differences between people. This was innovatively demonstrated in the pioneering social identity laboratory experiments conducted by Henri Tajfel (1970). In these studies, arbitrary tasks were performed by participants who were then told that they performed a certain way in the task, which inherently endeared them to those who performed similarly, and set them apart from others who performed differently. In reality, what the participants were told was random, and participants' in-group favoritism was essentially the result of perceived similarity with others rather than some actual similarity (See also: Tajfel et al. 1971).

In-groups within corporate organizations can form based on many different perceived similarities, such as break-related activities like smoking or tastes in restaurants or recreation, or even just preference for which restroom in the office employees prefer to use. In-groups may also form within corporate organizations based on gender, race, and even age. Although all of these alternative in-groups are possible, workplace training, responsibilities, and interpersonal interaction tend to occur within functional workgroups, “thus, occupations serve as major identity badges for situating individuals in the organization” (Ashforth, Harrison, and Corley 2008, p 350).

The Need for Positive Social Identity

Cognitive categorization, the formation of groups, and in-group membership among employees, are alone not satisfactory as explanations of intergroup or interfunctional bias. The

concept of positive social identity provides support for the phenomenon and is supported in the literature as “perhaps *the*... fundamental underlying motivation behind prejudice and discrimination” (Stangor 2009, p 3). Positive social identity is the desire to be positively identified by others, or to be viewed favorably, based on the group membership to which others categorize you (Hewstone, Rubin, and Willis 2002). Positive social identity is actively sought through the defense or building-up one’s in-group and by the attack or illegitimizing of out-groups. This form of downward comparison between groups can be deliberate, but can be done so passively rather than actively (Wills 1981).

The literature on positive social identity has produced a number of different explanations for this need for this identity, including to reduce uncertainty (Hogg and Abrams 1993), to reduce the threat of mortality (Solomon, Greenberg, and Pyszczynski 1991), or to achieve social domination (Sidanius and Pratto 2001). Regardless of the explanation, positive social identity is sought by individuals and motivates them to favor their in-group to the detriment of out-groups.

In corporate organizations and interfunctionally, this need for positive social identity is present (Hennessy and West 1999) and may even be amplified. Corporations operate under conditions of constrained resources that are often perceived as inequitably distributed among the functions of the organization. Depending on the focus of the founder, the current CEO, the board of directors, other executive influences, or even the culture of the company, resource and other favoritism may be provided to one function over another. Such inequity may exist in society-at-large, but more subtly and often without direct identification implications. In addition, employees’ functional workgroups and their profession often make up a meaningful portion of their self-identification (Ashforth, Harrison, and Corley 2008). Therefore, the need positive social identity can be and is often maintained within the corporate organization.

Organizational research examined the need employees have for positive social identity some time ago (Brown et al. 1986; Brown and Williams 1984), however, it is notably absent in recent organizational research (Sethi 2000). In the research presented here, interfunctional bias is thought to be the culmination of bounded cognitive capacity, cognitive categorization, and the need for positive social identity. This review and the proceeding studies are important to the business academy and to managers, since interfunctional bias can be influenced by internal and external motivation to not retain prejudicial perspectives. This point will be examined further in a subsequent subheading.

The Three Domains of Interfunctional Bias

Interfunctional bias is comprised of three different domains, including stereotyping beliefs, prejudiced attitudes, and discriminatory behaviors (Stangor 2009). Interfunctional bias is conceptualized in a linear relational configuration, from beliefs to prejudice to discrimination, and empirical research suggests that these relationships exist, albeit with some alternative influences and potential moderating variables.

The Stereotyping Beliefs Domain of Interfunctional Bias

Stereotypes are generalized beliefs about the attributes, characteristics, and/or behaviors of individuals that are based on their group membership (Hilton and Von Hippel 1996; Wieseke et al. 2012). Therefore, interfunctional stereotypes are inherently generalized beliefs about out-group members. Furthermore, stereotyping beliefs are directly related to the concepts of bounded cognitive capacity and cognitive categorization. Categorization occurs naturally through human cognition, including the formation of prototypes or category exemplars of the

categories. Stereotypes, then, are beliefs that are formed using the category exemplar as the basis of the belief. With regard to out-group stereotypes, this does not predispose the beliefs to be negative or inaccurate, although this is often the case.

Interfunctional stereotyping is apparent through the descriptions that someone might freely provide when asked to describe salespeople or accountants, or others within the firm. In a qualitative study on conflict attributions between marketing and engineering functions, *in vivo* descriptions of employees from the other function serve as evidence of interfunctional stereotypes. For example, marketers were described by engineers as “too bubbly” or that they “need twenty meetings to decide on the next meeting” (Keaveney 2008, p 655). Likewise, marketers expressed their generalized beliefs about engineers, including that engineers “stifle creativity [and] don’t compromise” or that they “live in a personality vacuum” (p 656). As harsh as these beliefs sound, they are the category exemplar, stereotyping beliefs held by many toward employees of these functions.

Empirical research has also studied the consequences of interfunctional bias and stereotyping. In two recent studies, salespeople’s negative headquarter stereotypes were examined for their influence in sales performance and salesperson behavior (Homburg et al. 2011; Wieseke et al. 2012). Wieseke et al. (2012) reported a negative relationship between sales performance and the general negative beliefs that salespeople hold about employees at their corporate headquarters. This group dynamic is function-based, with salespeople as the salient in-group and non-salespeople comprising the out-group. Similarly, Homburg et al. (2011) found that annual sales were negatively related with sales peoples’ negative headquarter stereotypes, as were sales employees’ adherence to corporate strategy. These studies provide support for the primary assertion that interfunctional bias negatively relates with interfunctional cooperation,

and provide a foundation for the present research. Extending this research-base to the attitudinal and behavioral domains of interfunctional bias will provide further insight into how these stereotypes likely developed into negative attitudes and uncooperative behaviors.

The Prejudiced Attitudes Domain of Interfunctional Bias

Prejudiced attitudes are “negative evaluations of members of out-groups” (Stangor 2009, p 3). These evaluations are based on generalized and potentially inaccurate beliefs about the person or people, lending the formed attitudes to also be generalized, potentially inaccurate assessments. As do interfunctional stereotypes, interfunctional prejudices reside in the cognition of the perceiver. There is presently an ongoing debate about whether or not intergroup prejudicial attitudes are negative by definition, or perhaps out-group-directed attitudes are simply less positive than in-group-directed attitudes (Stangor 2009). Given the context of the present study and the focus on negative stereotyping as a barrier to interfunctional cooperation, interfunctional prejudice here is assumed to be comprised of negative attitudes (Dovidio et al. 1996).

The Discrimination Domain of Interfunctional Bias

Discrimination has been described as “acting out prejudice” (Allport 1954, p 14) or the “[in]equality of treatment” (p 51). Alternatively, “discrimination is considered the behavioral component of prejudice” (Levy and Hughes 2009, p 25). The literature on discrimination is largely grounded in the social areas of sexism, racism, and ageism (Allport 1954; Krieger et al. 1993; Palmore and Manton 1973), and while the most severe of these discriminatory behaviors

could entail physical harm or even the destruction of life (Fein 1993), business-relevant studies of discrimination usually include less extreme behaviors (Cortina 2008).

Four specific cooperative/uncooperative behaviors emerged from anecdotal evidence and foundational interviews performed at the onset of this research. The first of these is interfunctional information sharing, which is a supported concept in the literature, that disparate groups within companies should maintain open communication, but often don't (Fisher, Maltz, and Jaworski 1997). Second, request fulfillment is essential to interfunctional cooperation, thus holding back adequate resources or filling the request apathetically is a sign that some barrier to interfunctional cooperation may be present. Third, animosity expressed between members of disparate functions is a signal of deeply rooted and potentially enduring disliking (Song, Xie, and Dyer 2000). Fourth, any behavior that favors the in-group, even at the expense of another function or the organization, can be rightly attributed to interfunctional bias, by definition (Tajfel 1970).

A Model of Interfunctional Bias

The first relationship depicted in this proposed model of interfunctional bias is the positive relationship between stereotyping and prejudice. This relationship is moderated by two different forms of employee motivation that should inhibit stereotyping beliefs in developing into prejudicial attitudes. One of these types of motivation to respond without prejudice is internal to the individual, meaning that individual employees can be personally motivated to not be prejudiced. The other type of motivation to respond without prejudice is external to the individual, such as incentives or social norms that might influence whether or not negative beliefs develop into negative attitudes. These two types of motivation are also thought to

compound in such a way that a three-way interaction is present in these relationships. Finally, interfunctional prejudice is suggested to relate positively with interfunctional discriminatory, uncooperative behavior. These hypothesized relationships are depicted in figure 5. An in-depth review of the proposed model and development of hypotheses will now follow.

The relationship between Stereotyping and Prejudice

Up to now, interfunctional stereotyping, prejudice, and discrimination have been described as related in a belief to attitude to behavior configuration. By definition, attitudes are the “evaluative response” of “beliefs about any given object” (Fishbein 1963, p 233; See also Smith and Clark 1973). The holder of a belief about something, or in the case of interfunctional bias, someone, will likely evaluate the object or person along some continuum, from positive to negative. This is described in the theory of reasoned action to be based on the combination of evaluation of beliefs and the importance of those beliefs to the individual (Fishbein and Ajzen 1975). Interfunctional prejudice, then, results from an evaluation of a stereotyping belief (Stangor 2009), and in the present study of interfunctional bias, strongly held negative beliefs and subsequent negative evaluations of those beliefs are the focus.

H1: Simple main effect: Interfunctional stereotyping strength is positively related with negative interfunctional prejudiced attitudes.

Internal Motivation to Respond without Prejudice

The extant literature on individuals’ motivation to respond without prejudice, or to not be prejudiced, has provided insight into how the relationship between stereotyping and prejudice might be attenuated. Dunton and Fazio (1997) proposed that two different types of motivation to

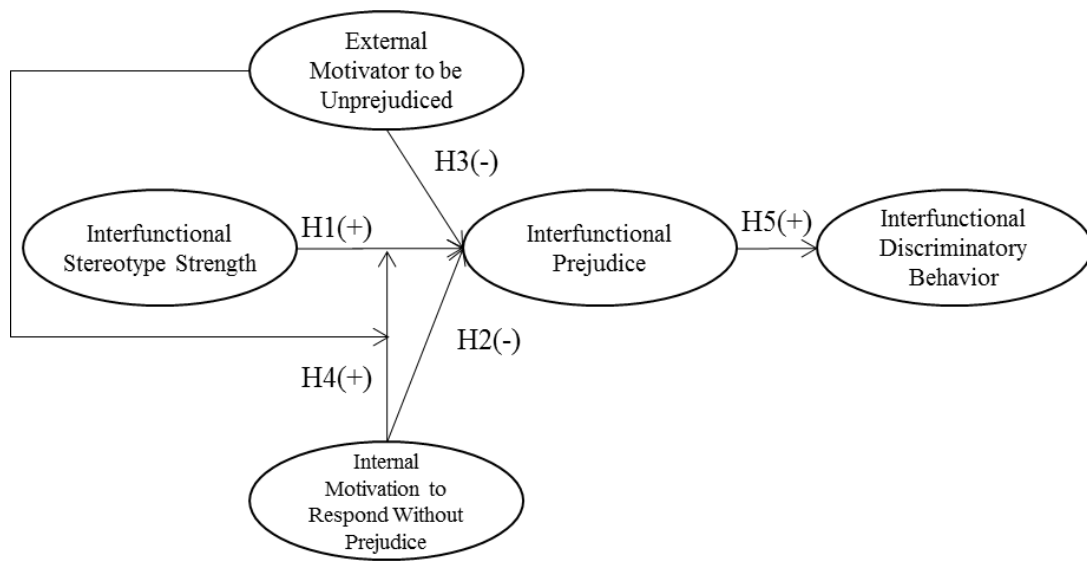


Figure 5 – The Hypothesized Model of Interfunctional Bias

respond without prejudice exist. The first is one's internal motivation or the personal standards one holds which is self-directed toward not being prejudiced. The second is external motivation or influence from outside sources which encourages one to not be prejudiced. Internal motivation to respond without prejudice (IMS) is a distinct source of motivation from external motivation to respond without prejudice (Plant and Devine 1998).

IMS has been demonstrated as a source of motivation even when others are unlikely to detect the prejudice, which suggests that it is a deeply held desire to avoid being prejudiced (Plant and Devine 2009). For example, IMS has been found to be predictive of reduced negative attitudes toward gay men and lesbians (Ratcliff et al. 2006). Writing on racial prejudice, Butz and Plant (2009) note that "People whose motivation is self-determined (i.e., the internally motivated) effectively control prejudice across situations and strive for positive interracial interactions" (p 1311). This literature has consistently demonstrated that in various prejudicial contexts and under numerous conditions, IMS is important to the understanding of prejudicial attitudes.

In the examination of interfunctional bias, IMS is hypothesized to behave no differently. Employees who are internally motivated to respond without prejudice should exhibit less negative prejudicial attitudes toward employees of other functions. Conversely, employees who lack the internal compass or direction to be non-prejudiced will not self-regulate their negative attitudes toward other functions' employees.

Unfortunately, the literature is unclear regarding the antecedent nature of IMS and whether it should be imposed in the present model of interfunctional bias as an independent antecedent of interfunctional prejudice, or as a variable which moderates the relationship between interfunctional stereotyping and prejudice. The literature does suggest an imperfect

correlation between stereotyping and prejudice (Stangor 2009), and on that basis, IMS is hypothesized to be one of the variables that directly correlates with interfunctional prejudice. However, this simple main effect has to be viewed in light of a yet-to-be-hypothesized three-way interaction, which includes the attenuating influences of both IMS and external motivators on the relationship between stereotyping strength and prejudice (Plant and Devine 2009).

H2: Employees' internal motivation to respond without prejudice reduces the presence of expressed interfunctional prejudiced attitudes.

External Motivators to be Non-prejudiced

Interfunctional stereotyping beliefs are not unnatural and are likely to occur, so the practical question managers may ask is: How can employees' negative stereotyping beliefs be prevented from developing into prejudiced attitudes and discriminatory behaviors? The preceding review of IMS is one answer to this question, to the extent that internally non-prejudiced employees can be hired, managers might consider doing so. In addition to internal motivation, external motivation also has efficacy in quelling intergroup bias (Plant and Devine 1998). However, whereas IMS is predictive of reduced prejudice when this prejudice will be either detectable or undetectable by others, external motivators are only effective when the prejudice is detectable (Plant and Devine 2009). In other words, external motivators can be effective when employees' prejudice is potentially on display.

In the corporate setting, and in this study of interfunctional bias, the employees' expectation is likely to be that their attitudes and behaviors are on display and under the scrutiny of managers. Therefore, managerial oversight is unique to this study of intergroup bias, since studies of racism, sexism, or ageism rarely, if ever, have an authoritative force that potentially

monitors explicit bias. Managers have the power to incentivize and penalize employees in order to influence certain behaviors, as a basic form of influence and motivation in corporate organizations. For example, monetary incentives to be non-prejudiced should provide an external motivation to employees to reduce their interfunctional prejudicial attitudes. This is unique to the study of interfunctional bias, as societies do not have mechanisms to incentivize reductions in race, sex, or age related prejudice.

Social norms should also be considered an external motivation to be non-prejudiced, if the culture of the in-group maintains bias-reducing norms. Managers have less direct control over the cooperative culture of their functional workgroups, but fostering such a culture can be very powerful, considering the strong influence employees can have on one another. As with IMS, the simple main effect hypothesized with external motivations to be non-prejudiced will be considered alongside a hypothesized three-way interaction.

H3: External motivators to be non-prejudiced (either incentives or norms) reduce the presence of expressed interfunctional prejudiced attitudes.

The Dual-effect of IMS and External Motivators to be Non-prejudiced

Although research has shown that internal and external motivation to respond without prejudice are separate constructs that can be measured independently, research has not yet examined the effects that the presence or absence of external motivators to not be prejudiced might have on IMS. The literature does suggest that IMS is resilient as a predictor of prejudice (Ratcliff et al. 2006), even in private or when intoxicated (Schlauch et al. 2009). However, it is unclear what might be the outcome of a three-way interaction between stereotyping strength,

IMS, and an external motivator to be non-prejudiced, when relating these with interfunctional prejudice.

The relationship between interfunctional stereotyping strength and negative interfunctional prejudiced attitudes should be negatively moderated by IMS. In other words, for those high in IMS, a less positive or non-existent relationship is expected. When an external motivator is present, this moderated relationship is not expected to change. What changes in this three-way interaction is with those low in IMS between the presence or absence of external motivators. When an external motivator is not present, those low in IMS have no apparent motivation to keep interfunctional stereotypes from developing into interfunctional prejudices. When an external motivator is present, however, this motivation exists and the negative moderating effect of IMS on the relationship between interfunctional stereotyping strength and negative interfunctional prejudiced attitudes should be made less positive. This suggests a 3-way interaction.

H4: The moderating influence of employees' internal motivation to respond without prejudice on the relationship between interfunctional stereotyping strength and negative interfunctional prejudiced attitudes will be amplified when in the presence of an external motivator to be non-prejudiced (i.e., incentives, social norms); however, those with low internal motivation will have a lower level of negative interfunctional prejudiced attitudes related to interfunctional stereotyping strength, when in the presence of an external motivator.

The relationship between Prejudice and the Intent to Discriminate

Fishbein (1961) proposed that beliefs and attitudes form a summated evaluative response that is elicited on occasions when the response is needed. The model of interfunctional bias

hypothesized in this research positions prejudice as a mediator between beliefs and behavioral intentions, consistent with this literature base (Fishbein 1963). Some conceptions of attitudes suggest that they are comprised of cognitive, affective, and conative elements (McGuire 1969). Furthermore, in a review of the relationship between attitude and behavior, Ajzen and Fishbein (2005) put forward that “if the goal is to predict behavior, we have to assess the conative or behavioral component rather than the affective component” (p 177; for an example see Kothandapani 1971). Kelman (1974) and Fishbein and Ajzen (1975) defended the relationship between attitudes and behavior against critics of research which found that attitudes are poor predictors of behavior (See: Wicker 1969). Kelman (1974) proposed that attitudes play a cyclical role in the context of the action, the contemplation of the action, and the consequences of the action. In effect, attitudes inform behavior, from which the employee may learn and update their attitudes. Prejudice and discrimination and therefore hypothesized to be positively related.

Ajzen and Fishbein (2005) suggest that “human behavior is complex and, therefore, very difficult to explain and predict.” In the present research, and consistent with the Theory of Reasoned Action, we approach the behavioral consequences of interfunctional bias, or discrimination, by means of behavioral intentions rather than through observing or otherwise recording actual behaviors. The behavioral intentions of interest in this study are concerned with interfunctional cooperation. These specifically include likelihood to share information, fulfill the requests of others, behave toward others with animosity, and behaviorally favor the in-group at the cost of out-groups.

H5: Interfunctional prejudicial attitudes lead to interfunctional discriminatory behavioral intentions, including a) not sharing information; b) not fulfilling requests; c) malevolent treatment; d) in-group favoritism at others expense.

Method

A randomized experiment is the preferred method for this research, as it permits the priming of stereotyping beliefs, the simulation of incentives and social norms as potential external motivators to be non-prejudiced, and the measurement of prejudice and discriminatory behavioral intentions. An online administration of the experiment was chosen for its ease of administration to a broad sample of employees from different companies. In order to test the efficacy of the questionnaire and manipulations a pilot study was performed at the outset of the data collection.

Operationalization of independent variables.

Each participant received the following instruction as introductory information about the anticipated interfunctional simulation:

A long-term customer has recently requested special accommodations that may require product re-engineering and potential disruptions to the supply chain. Your task in this online activity will be to arrive at an agreed upon solution, if one can be reached. You will be working with 2 employees from the sales and engineering functions of the sponsoring company.

This was followed by a manipulation about the participants' potential incentives in the study.

The control group received a message that “no additional incentive [would be provided] for working cooperatively with others in the simulation.” The incentivized group was told that “the more cooperatively [they] work with the others [in the study], and more additional monetary incentive [they] will receive.” In the social norm manipulation, participants were informed either that “Supply chain professionals at the sponsoring company value and support cooperation between functions when working in teams,” or that “The need to cooperate between functions is not necessarily valued nor supported among supply chain professionals at the sponsoring company.” Thus, participants were randomly assigned to either receive reinforcing social norms, or not, or be told that they would be incentivized to cooperate, or not.

The third part of the information provided to participants before the anticipated simulation included the following:

Before you interact with the salespeople in the activity simulation, please note that they are employed as salespeople in the sponsoring company. They have been given instructions to behave as they normally would in their workplace.

This statement was intended to set up the stereotyping manipulation, in which the control group received positive beliefs about salespeople and the stereotype-primed group received negative beliefs about salespeople.

For the stereotyping manipulation, participants in the control condition were told that the “supply chain employees [at the sponsoring company] indicated that their salespeople tend to:”

- Be well informed about the company’s operations.
- Be like “pillars” in the organization, supporting others where needed.
- Act like they are teammates to others in the organization.

Participants in the stereotype-primed condition were told the same thing, but the tendencies of the salespeople were changed to reflect negative beliefs. In this condition, salespeople tend to:

- Be ignorant about the company's operations
- Be like the “cowboys” of the organization, out doing their own thing.
- Feel like they are superior members of the organization.

The researchers expected that with this manipulation, participants should forego their own beliefs about salespeople and adopt the beliefs in this manipulation. As will be reported later, stereotyping beliefs are deeply rooted and not likely to be altered by such a manipulation. In anticipation of this challenge, a measure of the general measure of strength of negative stereotypes toward salespeople followed later in the questionnaire.

Immediately following the simulation information the participants were told to share the thoughts they have concerning the simulation information they were just provided. These thoughts were collected in an open response format, allowing up to four different thoughts to be collected. Besides providing the researchers with some insight into how the presented manipulation might have been perceived, the thought exercise also permitted the participant to slow down and internalize the information more. This open-response collection of thoughts was followed by the measures of behavioral intentions, prejudice, IMS, and measured stereotyping strength.

Pilot Study Test of Manipulations

A pilot study consisting of a 2 x 2 x 2 factorial design (stereotype beliefs x incentives x social norms) was conducted with 40 supply chain employees and focused on salespeople as the out-group. The incentives and social norms manipulations are both external motivators to be

non-prejudiced. Social norms have been shown to reduce intergroup bias specifically (Crandall, Eshleman, and O'Brien 2002), and monetary incentives are used in management research as a way to motivate employees (Kreps 1997). Each is expected to directly relate with prejudice and interact with stereotyping and IMS similarly.

The introduction of the questionnaire instructed participants that the research was sponsored and that its purpose is to “provide more insight into the nature of working cross-functionally” in corporate organizations. This was followed by the cover story that participants would be involved in “a simulated online problem-solving activity with engineers and sales people from the sponsoring company.” Participants were then told that they would be given some additional information about the activity and asked a few questions. The experimental manipulations, as described below, were then administered via the information provided about the anticipated simulation.

Pilot Study Results

The pilot study provided insight into the strong influence of social norms in interfunctional bias. However, the norms manipulation difference main effect overwhelmed the stereotyping and incentives manipulations such that the latter two did not result in main effects on prejudice. Through the examination of contrast between the cells, it became apparent that the social norms manipulation in the experiment, as designed, was preventing a test of incentives as a potential influence in interfunctional bias.

The literature supports the finding that social norms can be powerful in guiding action, particularly when the norms are associated with an in-group (Terry and Hogg 1996). The theories of reasoned action (Ajzen and Fishbein 1977) and planned behavior (Ajzen 1985) each

include a subjective norm antecedent of behavioral intentions. This suggests that “social norms not only spur but also guide action in direct and meaningful ways” (Schultz et al. 2007, p 429). Based on this, social norms of the in-group should be more influential than incentives in their direct relationship with interfunctional behavioral intentions and their moderating effect on IMS. This is also akin to the literature on intrinsic and extrinsic motivation in which extrinsic motivation (e.g. monetary incentive) is less effective than intrinsic motivation (Kasser and Ryan 1996), of which social norms would more closely align (Kreps 1997). In order to test the independent influence of incentives, it was decided to run two studies, the first including the incentive manipulation, the second to include the social norm manipulation. Effectively, these two external motivators to be non-prejudiced were tested in separate studies.

Study 1

The social norms manipulation was removed from the questionnaire and no other changes were made to the instrument in study 1. The questionnaire was again administered online to supply chain employees and professionals about salespeople. In total, 81 participants completed the questionnaire. The sample’s average age was 43 and 16% of the participants were female. The average number of years of supply chain experience per participant was 18 and the average tenure at their present employment was 7 years.

Measures

The first measure collected from participants was their likelihood to behave cooperatively in the “cross functional team in which [they were] about to work.” The wording of the items used to measure this behavioral intention were derived from interviews performed by the lead

researcher and from the literature on interfunctional cooperation. A Likert 7-point scale was used to measure the likelihood that participants would engage in each behavior, ranging from very likely to very unlikely. Participants were asked to “indicate how likely [they] will be to do the following during the simulation.” The two positive behaviors included “share information with the salesperson” and “consider fulfilling the requests of the salesperson.” The two negative behaviors included “treat the salesperson as a foe rather than a friend” and “stand up for the needs of the supply chain, even at the expense of the needs of sales.”

The general attitude of participants toward the salesperson, who they anticipated working with in the simulation, was collected next. This was measured on a seven-point semantic differential scale. The anchors included objectionable/acceptable, uncooperative/cooperative, unfavorable/favorable, hostile/friendly, dislike/like, dissatisfactory/satisfactory, suspicious/trustworthy, bad/good, and intolerable/tolerable.

Following these measures of the endogenous variables in this study, the participants were provided with a brief debriefing, informing them that there would be no online simulation and that no additional incentives would be provided. They were also encouraged to maintain a high level of attention, as the remaining part of the study was very important. In order to validate the authenticity of the cover story and the responses given by participants up to that point, three manipulation checks were performed. The first manipulation check asked participants to indicate, on a seven-point agreement scale, their agreement on three similarly worded items about their expectations with the simulation. One example stated “I fully anticipated being in a simulated interfunctional team during this study.” The average response for each of the three items in this manipulation check exceeded the scale response “Somewhat agree,” indicating that

participants appear to have responded to the measures of the endogenous variables actually anticipating an interfunctional interaction.

The second manipulation check simply asked participants to report whether or not they were offered an additional incentive for cooperating in the simulation. Only eight people could not recall this once they reached this point in the survey, and ten more did not report the correct response based on the experimental condition to which they were randomly assigned. The third manipulation check asked participants to indicate, on a seven-point scale, how positive or negative was the information provided to them about the salespeople in the simulation. An independent samples t-test of the mean of this manipulation check between the conditions indicates that this manipulation was largely perceived correctly by the participants ($t(79) = 7.202, p < .001$).

The participants were then presented with a measure of internal motivation to respond without prejudice. The items and scale for this measure were adapted from (Plant and Devine 1998). The items were left as general as possible, meaning that they remain abstract enough that they measure internal motivation to respond without any sort of prejudice, not just prejudice that might be experienced between employees of corporate organizations. The scale used is a seven-point agreement scale, ranging from strongly disagree to strongly agree. Two example measures include “I attempt to act in non-prejudiced ways toward others because it is personally important to me” and “Being non-prejudiced toward others is important to my self-concept.”

Before the measures of salesperson-related negative stereotyping strength were presented, participants were asked whether or not they answered the questions about behavioral intentions and attitude toward salespeople using their “own corporate experience as a reference-point.” Those who answered affirmatively were then asked the extent to which they agree with positive

and negative statements about salespeople. These statements were developed through interviews with current and former supply chain employees and the measures used here were validated previously, in chapter 4 (Essay 1) of this dissertation. The same agreement scale as internal motivation to respond without prejudice was used to measure these stereotyping beliefs. Again, examples of beliefs in this measure include “In general, salespeople are ignorant about the company’s operations” and “Salespeople are like the ‘cowboys’ of the organization, out doing their own thing.”

Data Refinement and Validation

The measurement items that reflect constructs in the hypothesized model of interfunctional bias were examined for convergent and discriminant validity through a measurement model in the AMOS statistical software program. Specifically, the nine items reflecting prejudice and five items reflecting internal motivation to respond without prejudice were included in the model. In addition, six of the twelve items reflecting interfunctional stereotyping strength, were included. The loadings of the other six suggested that they reflected different factors. An examination of their content revealed that four of these were positive belief statements, whereas the retained items were negative. The other two omitted items were worded in such a way that they more closely reflected inequity or an imbalanced workload for salespeople, rather than negative beliefs about the salespeople. While these might be reasons for animosity to form between the groups, they don’t reflect stereotyping beliefs, as the statements are not wholly in the control of the salespeople.

The items for internal motivation to respond without prejudice exhibited high kurtosis and were transformed using the exponent function in SPSS. The measurement model was then

refined using the modification indices, which led to the correlation of error terms between two sets of items in the prejudice construct. The resulting measurement model exhibited good model fit (CMIN/DF = 1.362; CFI = .947; RMSEA = .067). Convergent validity for each of these constructs was observed (AVE > .5; Composite Reliability > .83) and discriminant validity between these constructs was also present (Max β < .43). The data for these constructs were then imputed a regression imputation.

Before a full test of the hypotheses was initiated, the researchers first examined the relationship between stereotyping and prejudice, which is an established relationship in the literature. This was done to determine the trustworthiness of the manipulated stereotyping condition. If the negative stereotyping beliefs provided in the manipulation relate positively with prejudice, then the efficacy of the manipulation would be apparent. However, the researchers suspected a priori that stereotyping beliefs are deeply rooted enough to be enduring, in spite of the information provided in the manipulation. An independent-samples t-test revealed that the manipulation may have been somewhat effective in priming lower prejudice, but at a low level of confidence ($t(79) = 1.893, p < .1$). Contrasting this with the correlation between the measured construct of stereotype strength and prejudice, the measured construct better depicts what the literature suggests should be the relationship between these two variables ($\beta = .37, p < .001$). Although the manipulation of stereotypes was maintained in the studies, given the suspect results of the primed stereotyping condition, versus the measured stereotyping strength variable, the hypotheses were tested exclusively using the latter approach.

Study 1 Results

The hypotheses were tested using multiple linear regression and a full depiction of the results can be found in table 6 and figure 6. The incentives manipulation was dichotomous and was dummy coded, allowing for its use in the regression equation. As already alluded to, the first hypothesis is supported in the data, with a positive relationship between stereotyping strength and prejudice ($\beta = .37, p < .001$). The second hypotheses is also supported, with ones' internal motivation to respond without prejudice negatively relating with interfunctional prejudiced attitudes ($\beta = -.41, p < .001$). On the other hand, incentives do not appear to relate with interfunctional prejudice directly ($\beta = -.01, p > .05$) as hypothesized in H3.

Tests of the two-way interactions between interfunctional stereotyping strength, IMS, and the incentives external motivator were performed before the three-way interaction was examined. With prejudice as the dependent variable, IMS and incentives do not interact ($\beta = .034, p > .05$), nor do stereotyping strength and incentives ($\beta = -.04, p > .05$). IMS does, however, attenuate the relationship between stereotyping strength and prejudiced attitudes ($\beta = -.219, p < .05$). This interaction should be viewed in light of any three-way interaction.

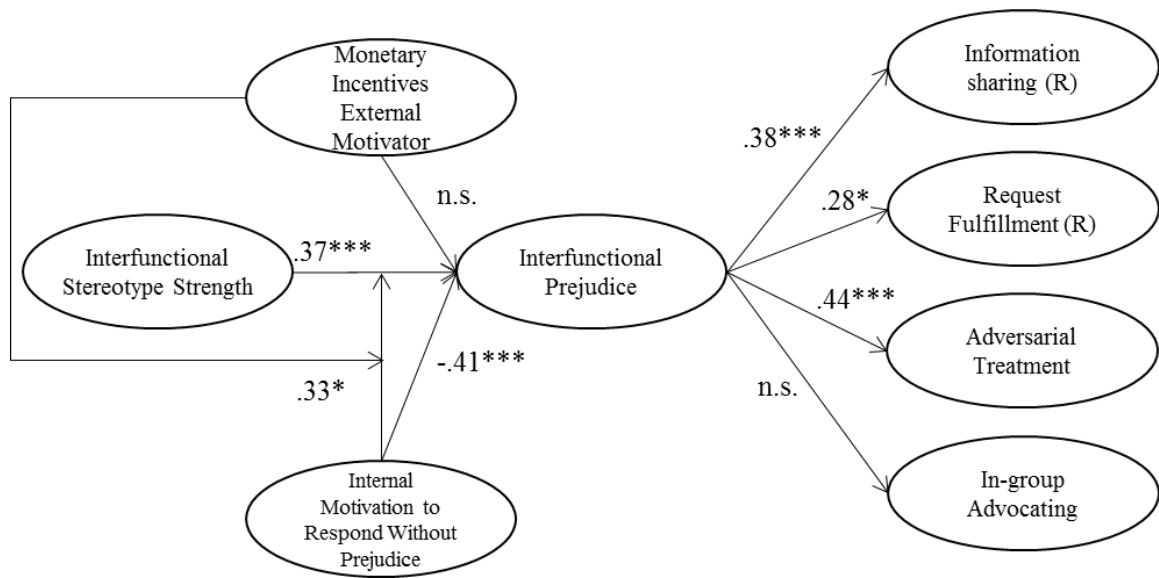
The hypothesized three-way interaction (H4) was supported in the data. As depicted in figure 7, the presence of an external motivator to be non-prejudiced only attenuates the relationship between interfunctional stereotyping and prejudice for those with a low internal motivation to respond without prejudice, as hypothesized (from $\beta = .655, p < .001$; to $\beta = .336, p > .05$). For those with a high internal motivation to respond without prejudice, no relationship exists between interfunctional stereotyping and prejudice when incentives are presented ($\beta = -.283, p > .05$) and when they are not ($\beta = .225, p > .05$). Although these slopes do change direction and are statistically different from one another ($z = 1.854, p < .05$), neither indicates a

Table 6 – Reporting of Study 1 Regression Analyses Testing Hypotheses

	H1	H2	H3	H4
Stereotyping Strength	.369**	.254*	.371***	.162
Internal Motivation to Respond without Prejudice		-.408***		-.586***
External Motivator (incentive) to be Non-prejudiced			-.010	.133
Stereotyping Strength x Internal Motivation				-.484**
Stereotyping Strength x External Motivator				.085
Internal Motivation x External Motivator				.159
Stereotyping Strength x Internal Motivation x External Motivator				.331*
R ²	.14	.29	.14	.37

* $p < .05$; ** $p < .01$; *** $p < .001$

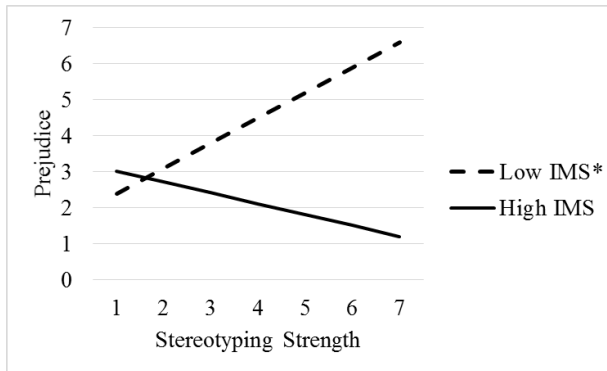
Dependent variable = interfunctional prejudiced attitudes



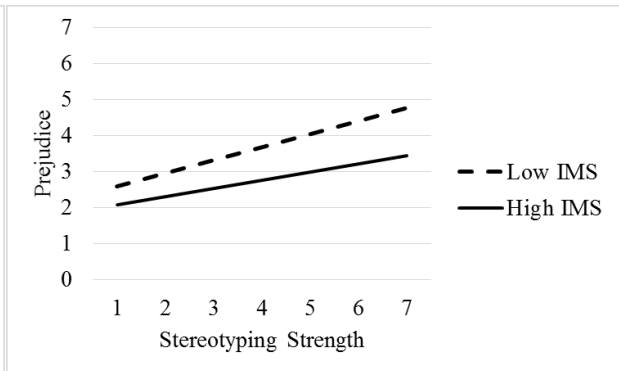
* $p < .05$; ** $p < .01$; *** $p < .001$

Figure 6 – Results of the Study 1 Test of a Model of Interfunctional Bias

No Incentive Condition



Incentive Condition



*Slope $\neq 0$ ($p < .05$)

Figure 7 – Three-way Interaction between Internal Motivation, Incentives and Stereotyping, on Prejudice

statistically significant relationship between interfunctional stereotyping strength and interfunctional prejudiced attitudes.

Finally, hypothesis five was supported for three of the four types of behavioral intentions collected in the study. Prejudice was negatively related with information sharing ($\beta = .383, p < .001$) and request fulfillment ($\beta = .280, p < .05$), and positively related with adversarial treatment ($\beta = .437, p < .001$). However, prejudice was not shown to relate with intent to behave as an in-group advocate ($\beta = -.188, p > .05$).

Study 1 Discussion

Study 1 provided support for several parts of the hypothesized model of interfunctional bias. The direct relationships between interfunctional stereotyping strength and interfunctional prejudiced attitudes, and between these attitudes and interfunctional discriminatory behavioral intentions help to provide initial validation of the use of interfunctional bias as a lens through which interfunctional cooperation should be studied (Sethi 2000). These relationships contribute to both the literature in intergroup bias and interfunctional cooperation by providing evidence of the impact of negative beliefs and attitudes about members of functional out-groups.

The relationship that IMS was shown to have with interfunctional negative attitudes provides insight into the importance of considering the individual employee and their internal compass when studying interfunctional bias. If stereotyping beliefs are pervasive at the organization, assigning employees with high IMS should help reduce the anticipated negative prejudiced attitudes, and consequent negative behavioral intentions of the employees.

Just as managerially directive, the offering of incentives to work inter-functionally with others was effective in reducing negative prejudiced attitudes when IMS is low and when

stereotyping strength is high. In other words, when high IMS employees are scarce and stereotypes are present, negative prejudiced attitudes can be quelled by offering incentives to work cooperatively. However, as anticipated, these incentives appear to have no effect when IMS is high or when interfunctional stereotyping strength is low.

The findings of study 1 provide valuable insights into the moderating and moderated influence of IMS, and the unique finding that incentives are not effective in prejudice reduction for those high in IMS, presumably due to their internal moral code (Plant and Devine 2009). In study 2 we take a similar look at another external motivator to be non-prejudiced through the study of social norms rather than incentives.

Study 2

Study 2 also consisted of a 2 x 2 x 2 between factors (stereotype x IMS x norms) experiment administered through an online questionnaire to supply chain employees. Seventy-one participants fully completed the study, of whom 24% were female, and the average age of participants was 42. Study 2 participants also indicated their experience in supply chain roles, and averaged 16 years of supply chain experience, with the last 7.5 years with the same company, on average.

Study 2 Instrument

Data were collected in study 2 much like in study 1. The only substantive difference between the studies is the use of social norms as the external motivator condition, still with random assignment to half of the sample. As before, the social norms manipulation was delivered through the description provided to the participants, as they received information about

the online interfunctional activity. The incentive manipulation was replaced with the social norms manipulation, as previously described. As that description depicted, the social norm condition applied to the participants' relevant in-group, consistent with the literature (Terry and Hogg 1996). Other than this difference, studies 1 and 2 are identical, both in instrument and sampling procedures. This included another attempt to manipulate the cueing of stereotyping experimentally. Unfortunately, this manipulation was again unsuccessful, and as in Study 1, a measured level of general stereotyping strength regarding salespeople in Study 2 was employed as well.

Data Refinement and Validation

As with the first study, the nine interfunctional prejudice items exhibited good convergent validity and were each used in the construct ($CR = .94$). The same six items for IMS were also found to converge around the construct ($CR = .90$) and were again transformed as before and used in study 2. The only change in the items used between studies was the removal of an item in the stereotyping strength construct, specifically: "Sales people generally get paid more than they deserve." Evaluating the content of this item against the others, it appears that in this sample this item may have been confounded by other influences, such as the pay structures where they work or the challenge of actually evaluating how much pay is deserved. Whatever the source of divergence from the stereotyping strength construct for this item, its removal improved the average variance extracted to above the .5 level ($AVE = .54$). Discriminant validity was observed in the data, with the square root of the AVE values exceeding the correlations between the constructs. The three-construct measurement model had good fit

(CMIN/DF = 1.260; CFI = .955; RMSEA = .061), and a linear imputation of the constructs was used to produce the measures used in the analysis of interfunctional bias.

Study 2 Results

As with study one, tests of the hypotheses were performed through a series of multiple linear regression analyses. As in study one, the first hypothesized relationship between interfunctional stereotyping strength and prejudice was supported in the data ($\beta = .31, p < .01$). Contrary to study one the direct relationship of IMS, hypothesized in H2, was not supported ($\beta = -.16, p > .05$). As anticipated, the direct relationship between social norms and interfunctional prejudice was found in the second study, supporting H3 ($\beta = -.28, p < .05$). These results are reported in table 7 and depicted in figure 8.

Potential two-way interactions were again tested among the variables hypothesized in the three-way interaction. Contrary to study 1, the relationship between stereotyping strength and prejudiced attitudes is not moderated by either IMS ($\beta = -.008, p > .05$) nor the external motivator to be non-prejudiced, in this case social norms ($\beta = .124, p > .05$). As well, the interaction between IMS and social norms is not related with prejudices attitudes in study 2 ($\beta = -.084, p > .05$).

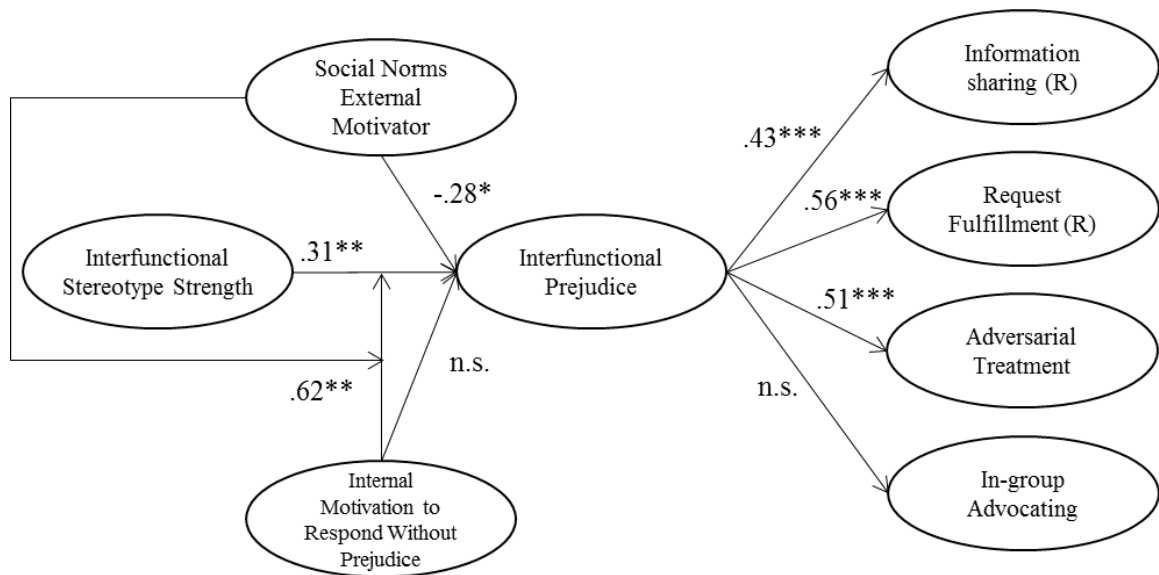
Hypothesis H4, was again supported in the second study, indicating that the three-way interaction between stereotyping strength, IMS, and social norms is related with interfunctional prejudiced attitudes ($\beta = .619, p < .01$). The results are graphed in figure 9 and indicate similar relationships between the variables as was found in study 1. Like with incentives, when social norms are not present, employees who are low in IMS exhibit a positive relationship between stereotyping strength and prejudiced attitudes ($\beta = .700, p = .01$). As with study 1, when social

Table 7 – Reporting of Study 3 Regression Analyses Testing Hypotheses

	H1	H2	H3	H4
Stereotyping Strength	.309**	.256*	.334**	.187
Internal Motivation to Respond without Prejudice		-.164		-.173
External Motivator (norm) to be Non-prejudiced			-.277*	-.183
Stereotyping Strength x Internal Motivation				-.562**
Stereotyping Strength x External Motivator				.132
Internal Motivation x External Motivator				.018
Stereotyping Strength x Internal Motivation x External Motivator				.619**
R ²	.10	.12	.17	.29

* $p < .05$; ** $p < .01$; *** $p < .001$

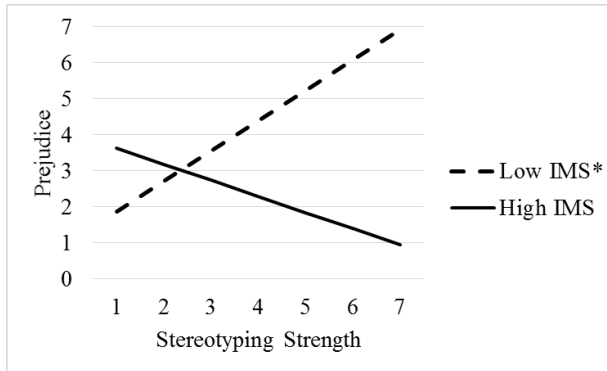
Dependent variable = interfunctional prejudice



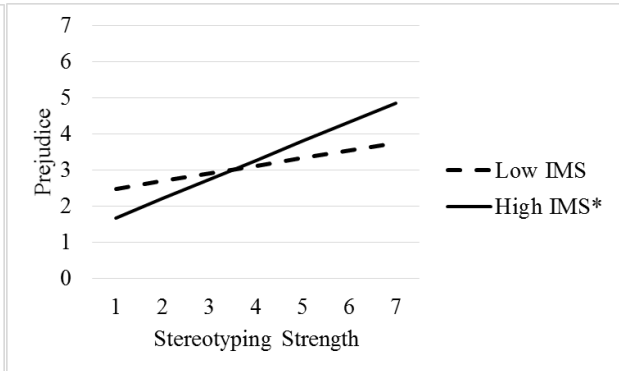
* $p < .05$; ** $p < .01$; *** $p < .001$

Figure 8 – Results of the Study 2 Test of a Model of Interfunctional Bias

No Social Norms Condition



Social Norms Condition



*Slope $\neq 0$ ($p < .05$)

Figure 9 – Three-way Interaction between Internal Motivation, Social Norms and Stereotyping, on Prejudice

norms are present for those low in IMS, no relationship between stereotyping strength and prejudices attitudes is observed ($\beta = .240, p > .05$). As well, those high in IMS and in the no norms condition again have no relationship between stereotyping strength and prejudice ($\beta = -.374, p > .05$). However, quite different from study 1, those who are high in IMS and in the social norms condition exhibit a positive relationship between stereotyping strength and prejudice ($\beta = .604, p < .05$).

Also consistent with study one, interfunctional prejudiced attitudes are related with three of the four interfunctional cooperative behavioral intentions. Specifically, information sharing ($\beta = .43, p < .05$), request fulfillment ($\beta = .56, p < .05$), and adversarial treatment ($\beta = .51, p < .05$) were each related with interfunctional prejudiced attitudes in the direction hypothesized, and again, intent to advocate for the in-group was not related.

Study 2 Discussion

Although the results of study two largely replicate the findings in study one, there are a few notable exceptions. First, as suspected, social norms appear to be more influential in their relationship with interfunctional prejudice than IMS, when they are considered for their direct effects. The mere inclusion of social norms in the study appears to mitigate the influence of IMS toward prejudice reduction, as also suggested in the pilot study results.

Just as noteworthy as a deviation from the results of study one is the three-way interaction graphing, which depicts IMS as attenuating the relationship between stereotyping and prejudice when social norms are absent. However, when social norms to cooperate are present those high in IMS appear to reject or rebel against that social norm, resulting in a positive relationship between stereotyping and prejudice ($\beta = .60, p < .05$). This change from no

relationship between stereotyping and prejudice to a positive relationship, in the face of social norms and high IMS is surprising and was not expected. However, there is precedent in the literature concerning the deleterious effects that an external motivation (e.g. social norms) can have on an internal motivation (Deci 1971). Nonetheless, if this is the explanation, we are left wondering why study one did not produce the same result, since incentives are quintessentially a form of extrinsic motivation, whereas social norms are not.

An additional argument might be made for why this surprising result was found. First, consider the importance or value that employees may or may not place in working in teams. If employees feel that team-based work is critical to the organization or an important part of their job, then no additional complications to the present examination would be expected. However, if employees do not value or see the importance of team-based, interfunctional work, then we might further consider their rebelling against both internal and external motivation to allow their stereotyping beliefs form into prejudiced attitudes as a form of reactance. Reactance theory suggests that as individuals feel constrained or like their personal freedoms are inhibited, they are then motivated to behave in a contrary manner (Brehm and Brehm 2013). If the individual feels forced into the interfunctional working relationship, both internally and externally, contrary to their value of working in teams, they may form negative attitudes as a reaction. Further research on social norms and their interaction with stereotyping strength and IMS are certainly needed to confirm this suggestion.

General Discussion

Both studies undertaken in this research provide several compelling theoretical and managerial implications. First, this is the first study that approaches the challenge of

interfunctional cooperation through an examination of the three domains of interfunctional bias. The stereotyping beliefs, prejudiced attitudes, and discriminatory behavioral intentions of members of one functional discipline toward another were found to positively relate, as hypothesized in the proposed model. This not only further validates the use of stereotyping in interfunctional research, it also provides support for the use of the attitudinal and behavioral domains of interfunctional bias in future research.

Second, when social norms are not a consideration, as in study one, IMS moderates the relationship between interfunctional stereotyping and prejudice when no incentives are offered for interfunctional cooperation. Incentives are effective in attenuating the belief attitude relationship for those low in IMS. Put another way, employees with high IMS should be sought after for positions that rely on interfunctional cooperation. However, when employees with low IMS are expected to work interfunctionally, study one suggests that providing a monetary incentive for cooperating could be effective in curbing their preconceptions of those in the other function, and reduce related negative attitudes.

Third, social norms appear to directly influence the effects of IMS when they are a consideration in the model. In the no social norms condition, IMS attenuates the relationship between interfunctional stereotyping and prejudice. On the other hand, when social norms to cooperate are present, those with low IMS follow the crowd, and their strongly-held stereotyping beliefs are not related with prejudiced attitudes. However, unexpectedly, those high in IMS seem to rebel against the social norm and their biased beliefs and attitudes are related. Future research should further examine this anomaly, as it seems incorrect to suggest that social norms to cooperate could lead to increased interfunctional bias, as found in study 2. Future research

should include reactance theory and employees' feelings toward group-based work as potential sources of motivation in this finding.

Finally, three of the four types of negative behavioral intentions were found to positively relate with interfunctional prejudiced attitudes. In-group favoritism, or “stand[ing] up for the needs of the [functional in-group], even at the expense of the needs of [the functional out-group],” was not found to positively relate with prejudice. This is consistent with another study on interfunctional bias in which functional identification was determined to not be an antecedent of interfunctional stereotyping and prejudice (See chapter 4 of this dissertation). In order for prejudice to positively relate to in-group favoritism, as measured in this study, the employee must view their functional group as an in-group, which was outside of the scope of this study. Accounting for functional identification in future studies may provide evidence that prejudice is related with in-group favoritism, depending on the employees' identification with the in-group.

Limitations and Conclusion

One limitation of both studies was the failure to cue or prime interfunctional stereotyping beliefs among participants in the stereotyping condition. The collection of the negative stereotype strength construct permitted the analysis of the hypothesized models. Future research that seeks to create a stereotyping condition should deviate from the method used in the present attempt. One recommendation is to choose a stereotyped group for which strongly held stereotypes are not as well defined or pervasive, as they are for salespeople. For example, marketing employees may not have consistently or strongly formed beliefs about supply chain professionals. Thus, priming participants with how to believe may be more successful in such experimental settings.

Another limitation of the study is the lack of environmental control researchers had at the time that the participants participated in the study. Using online questionnaires has this inherent limitation. To account for this, an attention check was placed in the survey, embedded as an item in the IMS measurement. In both studies, greater than 92% of participants passed this check, indicating that their attention, at that place in the survey, was primarily on the survey. Regardless, this limitation persists.

Finally, both studies relied heavily on measured (versus manipulated) constructs, making causal inference impossible to determine. While the literature on beliefs, attitudes, and behaviors suggest these are all related, the causal direction of the relationships, while represented in this proposed model, may well be recursive. These studies and this research seek to contribute to the literature through demonstrating these relationships of interfunctional bias in corporate organizations, but it is clearly outside of the purview of this study to insist on strict causality in any form, although it is theoretically supported in this research.

Over the course of this research two studies, supply chain employees have revealed that interfunctional stereotyping is related to interfunctional prejudicial attitudes, and that these attitudes are related, in turn, to discriminatory behavioral intentions. IMS attenuates the relationship between stereotyping and prejudice when no external motivator is present, but the nature of the moderating effect also depends on the existence and nature of an external motivator to not be prejudiced. Managers seeking to encourage interfunctional cooperation should consider the potential disruption of interfunctional bias, and the means by which the negative impact of interfunctional bias can be attenuated when interfunctional cooperation is the goal.

Chapter 6 - Conclusion

Dissertation Overview

Over the course of this dissertation interfunctional bias was reviewed in the extant literature and hypotheses developed from this review were examined using data collected from supply chain employees regarding their perceptions of salespeople. The first of three studies provided insights into the nature of interfunctional stereotyping and provided support for a direct effects model of interfunctional bias (IFB). Specifically, organizational identification, equal status, and trait negative affect were found to positively relate with interfunctional stereotyping strength, directly. As well, the strength of supply chain employees' stereotyping beliefs, and their internal motivation to respond without prejudice, were both found to positively relate with interfunctional prejudiced attitudes toward salespeople. This first study provides important foundational insights into the organizational conditions under which IFB are present.

The second and third studies enabled the examination of the three domains of IFB, through the measurement of interfunctional stereotyping strength, prejudiced attitudes, and discriminatory behavioral intentions. Finding that these three positively correlate supports the basis of this study, which is that intergroup bias exists in corporate organizations like in other social settings, such as between race-based or sex-based groups. Furthermore, measuring internal motivation to respond without prejudice (IMS) and manipulating both monetary incentives and social norms (external motivators) provided insights into the motivations that may exist within the relationship between interfunctional stereotyping strength and prejudice. While the external motivators to be non-prejudiced were only effective in moderating the relationship between stereotyping and prejudice for those low in IMS, those high in IMS exhibited no relationship between stereotyping and prejudice under most conditions. In sum, studies two and

three supported study one by extending the study of IFB to the motivational and behavioral domains.

Managerial Implications

This dissertation provides important implications to the practice of managing functional groups that are expected to cooperatively work interfunctionally. The first and most prominent of these implications is that inequitable treatment of any group over another appears to be a major contributor to the holding of strong negative stereotypes toward members of other functions. Anecdotally, the focus of many company cultures and structures often revolves around the function that is held as the most important to the success of the company. Sometimes this is determined by the company founder, depending on if he or she was an engineer, salesperson, efficiency expert, or some other means of producing the value that led to early success. Boards of directors and c-level executives can also set a standard of inequality in companies, usually through a focus that monetarily, or through other resources, supports particular functions over others. To the extent that it is possible, managers should establish equality or a culture of fairness between functions that operate interfunctionally. At the very least, the perception of equal status between company employees of disparate functions should help reduce one potential barrier to interfunctional cooperation.

Also present as an antecedent of interfunctional bias is the absence of a superordinate identity, in this case, organizational identity. When employees view others in the organization as their in-group or as metaphorically playing for the same team, stereotyping may be present, but is not strongly held and does not therefore elicit prejudices. Many companies seek to establish a sense of team or belonging within their organizations and this research supports these efforts. However, organizational identification explained less of the variance than did equal status in

study one, suggesting that team-building alone will have a relatively small influence on interfunctional cooperation if employees feel like they are on unequal footing in the company.

Managers are also advised to be aware of the importance of considering employees' trait negative affect and IMS when hiring for positions that may require working interfunctionally. Employees who tend to feel negatively in their lives also tend to have strong stereotyping beliefs, as well as lower IMS. Consequently, since stereotyping beliefs and IMS are each related with interfunctional prejudiced attitudes, those high in trait negative affect are more prone to develop prejudices toward members of other functions. IMS should, however, be considered independently, as the correlation between IMS and trait negative affect is relatively moderate ($r = -.38, p < .001$) with significant variance unaccounted for. Therefore, managers should seek means of gauging the levels of IMS and trait negative affect, if possible, when hiring employees for whom interfunctional work is desired.

Theoretical Implications/Contributions

Several theoretical implications/contributions have been provided over the course of this dissertation. Primarily, the three domains of IFB were, for the first time in the marketing and management fields, examined in concert in a series of supporting studies. Until now, stereotyping beliefs have been the focus of studies in interfunctional cooperation, and while these studies have examined performance outcomes of interfunctional stereotypes (Keaveney 2008; Sethi 2000; Wieseke et al. 2012), none have examined prejudice or discriminatory behavioral intentions that are directly related with prejudice. In doing so, this research has provided support for the assertion that interfunctional bias operates similarly to racism, sexism, and agism, which are more traditional versions of intergroup bias. This is further validated as variables that relate

with traditional intergroup bias were adapted for use in examining interfunctional bias and resulted in significant empirical findings and important implications for managers and future research. Therefore, this research is foundational to the future examination of IFB, as researchers in the fields of management, marketing, supply chain management, and others, continue to adapt from the expansive literature on intergroup bias to further examine IFB.

The second noteworthy implication of this research is in the critical test of theory between the moderated and the direct effects models of IFB. The finding in favor of the direct effects model suggests that marketing research should de-emphasize functional identification and relative functional identification as sole antecedents of interfunctional cooperative performance. While functional identification was found to positively relate with stereotyping strength in model A, in the presence of organizational identification, equal status, trait negative affect, and the other conditions of contact, functional identification was not related with stereotyping strength in model B. Future research in this area should instead put a greater emphasis in the direct effects of equal status and trait negative affect, in addition to a superordinate identity.

The third theoretical implication of this research is related to the motivations found to attenuate the relationship between stereotyping and prejudice. While the study that included monetary incentives with IMS provided a fairly straight-forward and predicted indication of the interaction between these sources of motivation, including social norms as the external motivator caused IMS to be ineffective in attenuating the stereotyping/prejudice relationship. This suggests that other variables may be needed to better understand this finding. The theory of reactance was suggested as a possible alternative explanation for this finding, in that participants who do not value working in groups might have seen the group-based activity that was both internally and externally motivated as undue pressure to do something contrary to their will, and

they, therefore, reacted with negative attitudes. This proposed explanation deserved further examination through future research.

Two methodological implications are also noteworthy. First, the measures of prejudice and behavioral intentions can be readily adapted to functional contexts besides supply chain employees' perceptions of salespeople, however, the measure of stereotyping beliefs used in this research is salespeople oriented. Future research that examines other functions will require the collection of general beliefs that others hold about the function, and items reflecting those beliefs will have to be developed and pretested. This was done in this research through interviews with current and former supply chain employees, but other open-response methods might also be employed.

Second, organizational and functional identification were challenging to measure in concert, although previous research was able to do so (Wieseke et al. 2012). This was primarily due to identical wording between the items used to measure each construct. Additional items should be developed for either of these measures so that the wording of items between them can be altogether independent, lending to more discriminant measures of these discriminant constructs.

In sum, IFB is present in corporate organizations and has been empirically examined in this dissertation. As a barrier to interfunctional cooperation, IFB, exhibited through employees who hold stereotypes, prejudice, and intent to discriminate based on functional group membership, stands as a source of lost resources and revenue. Managers are advised to be aware of the presence of IFB in their organizations and take recommended actions to reduce its existence, wherever and whenever possible, through hiring and various motivational practices.

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Vita

William Adam Powell (Adam) is a son of William H. and Janel M. Powell and the eldest sibling of four brothers and three sisters. Adam was home-schooled from age eleven until receiving his general education diploma (GED) at the age of sixteen. He then enrolled at Gloucester County College, New Jersey and earned an Associate in Science degree in computer information systems. Following a two-year mission for the Church of Jesus Christ of Latter-day Saints, Adam married Karen Lynn Shipp and engaged in various professional pursuits, including sole proprietorship of a small lawn care company. He returned to college in 2006, at the age of twenty-six, completing a bachelor's of science degree from Wilmington University, Delaware. Adam then applied to and was accepted into the masters of business administration (MBA) program at Brigham Young University, Utah (BYU), from which he graduated in 2010, with minor studies in marketing and strategy. While at BYU Adam engaged in scholarly research with Dr. Sterling Bone, who mentored Adam in pursuing a PhD, eventually encouraging him to apply to the marketing PhD program at the University of Tennessee (UT). Before entering the PhD program at UT, Adam and Karen enjoyed the birth of their sixth child, and during their time in Tennessee welcomed a seventh into their family. Adam completed his comprehensive examination in July 2013 and spent the next three years completing this dissertation under the advisement of Dr. David Schumann. In August 2015 he joined the marketing faculty at Shippensburg University, Pennsylvania as an assistant professor of marketing.