COMPENSATORY NATURE OF MIXED STEREOTYPES: AN INVESTIGATION OF UNDERLYING MECHANISMS IN THE FRAMEWORK OF STEREOTYPE CONTENT MODEL

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This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Doctor of Philosophy.

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ABSTRACT

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The present dissertation aims to investigate cognitive and motivational underpinnings of stereotype contents in differing contexts. This dissertation consisted of two related sections. In the first section, comparison was suggested as the cognitive process underlying the implicit competence and warmth attributions toward businesswomen and homemakers. Four studies using Go/No Go Association Task were conducted to investigate the comparison process. Findings of the studies indicated that comparison has a significant impact on implicit mixed stereotypes. Implicit mixed stereotypes were not observed when target groups and attributes were presented in non-comparative context (Study 1). However, implicit stereotype contents were obvious in comparative context (Study 2). Finally, implicit stereotype contents of homemakers and businesswomen were shaped in accordance to the part of the context that was comparative (i.e. group comparison in Study 3 and attribute comparison in Study4). In the second section of the dissertation, comparison process was related to individuals' compensation tendency. Two studies were conducted to examine the compensation tendency in the framework of System Justification

Theory. In the first study (Study 5), presentation order of the target groups was manipulated. By this way, participants were not aware of the second group. Findings indicated that participants tended to compensate their first ratings toward homemakers and businesswomen. Furthermore, ambivalent sexism moderated the compensation tendency. In the second study (Study 6), both groups were presented together. Neither order of presentation nor its interactions were significant. Findings of the studies were discussed in the light of relevant literature.

Keywords: Mixed Stereotypes, Competence, Warmth, Compensation, System Justification Motivation.

ÖZ

KARIŞIK İÇERİKLİ KALIPYARGILARIN TELAFİ EDİCİ DOĞASI: ALTTA YATAN MEKANİZMALAR ÜZERİNE KALIPYARGI İÇERİĞİ MODELİ ÇERÇEVESİNDE BİR İNCELEME

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Bu çalışma, kalıpyargı içeriklerinin altında yatan bilişsel ve motivasyonel süreçleri birbirinden farklılaşan bağlamlarda incelemeyi amaçlamaktadır. Sunulan tez çalışması birbiriyle ilişkili iki bölümden oluşmaktadır. İlk bölümde karşılaştırma ev ve iş kadınlarına yönelik örtük yetkinlik ve sevecenlik atıflarının altında yatan bilişsel süreç olarak önerilmiştir. Karşılaştırma sürecini incelemek için Go/No Go Çağrışım Görevinin kullanıldığı dört çalışma yapıldı. Çalışmaların sonuçları karışık içerikli örtük kalıpyargılar üzerinde karşılaştırma sürecinin önemli bir etkisi olduğunu gösterdi. Gruplar ve özellikler karşılaştırmanın olmadığı bir bağlamda sunulduğunda karışık içerikli kalıpyargılar gözlenmedi (Çalışma 1). Bununla birlikte, karşılaştırmalı bağlam kullanıldığında örtük kalıpyargı içerikleri açık bir şekilde gözlendi. Son olarak, ev ve iş kadınlarına yönelik örtük kalıpyargı içerikleri ölçüm bağlamının hangi yanının değişimlendiğine bağlı olarak şekillendi (Çalışma 3'te gruplar, Çalışma 4'te ise özellikler karşılaştırılmalı olarak sunuldu). Tez çalışmasının ikinci bölüünde karşılaştırma süreci telafi etme eğilimi ile ilişkilendirildi. İki çalışma

yürütülerek Sistemi Meşrulaştırma Kuramı çerçevesinde telafi etme eğilimi incelendi. İlk çalışmada (Çalışma 5) hedef grupların sunum sıralaması değişimlendi. Böylelikle katılımcıların değerlendirecekleri ikinci grubu bilmemeleri sağlandı. Sonuçlar, katılımcıların ilk grup için yaptıkları değerlendirmeleri telafi etme eğiliminde olduğunu gösterdi. Ayrıca çelişik duygulu cinsiyetçilik bu telafi etme eğiliminde düzenleyici rol oynamıştır. İkinci çalışmada (Çalışma 6) her iki grup katılımcılara birlikte sunulmuştur. Bu çalışmada sıra etkisinin ve etkileşim etkilerinin anlamlı olmadığı gözlenmiştir. Çalışmaların bulguları ilgili literature bağlamında tartışılmıştır.

Anahtar Kelimeler: Karışık İçerikli Kalıpyargılar, Yetkinlik, Sevecenlik, Telafi Etme, Sistemi Meşrulaştırma

To my beloved wife

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CHAPTER 1

INTRODUCTION

The last decade of the stereotype literature has been faced with an increasing interest in the contents of stereotypes. Differing from the earlier efforts aimed to identify differing contents/attributions of specific group stereotypes (Kite & Johnson, 1988; Schmidt & Boland, 1986); recent studies put an extensive effort to conceptualize fundamental dimensions underlying perception of individuals and social groups (Alexander, Brewer, & Livingston, 2005; Fiske, Cuddy, Glick, & Xu, 1999; 2002; Phalet & Poppe, 1997; Wojciszke, 2005). These efforts seem to stem from the dissatisfaction with the answers of the 80's cognitive orientation to the oldest question of the stereotype literature: "where do stereotypes come from?" and "how could stereotypes be changed to improve intergroup relations?" Coupling with the emerging understanding of explanatory/legitimatory functions of stereotypes, this dissatisfaction seems responsible for the reconsideration of content issue.

Stereotype Content Model (Fiske et al., 2002) stems from a such dissatisfaction with underlying assumption of discrimination literature, namely the univalent antipathy assumption which conceptualizes stereotypes on a single dimension representing favorable/disfavorable beliefs toward social groups (Fiske, Cuddy, & Glick, 2007). Opposing the univalent antipathy assumption, Fiske et al. (1999; 2002) suggested a two-dimensional model suggesting competence and warmth as the fundamental dimensions of stereotype contents. By this way, they differentiated four kinds of stereotypes segregating univalent and ambivalent beliefs/emotions toward social groups. On this basis, Fiske et al. (2002) provide significant arguments regarding to the societal sources of the stereotypes and to the question of why stereotypes are resistant to change. On the one hand, SCM suggests intergroup status differences and the competition between groups as to be the social structural variables shaping the competence and the warmth attributions toward social groups, respectively. On the

other hand, Fiske et al. (1999; 2002; see also Oldmeadow & Fiske, 2007) suggest that system justifying functions of ambivalent stereotypes make them resistant to change, since interventions to the ambivalent stereotypes would be seen as a threat to the existing status quo.

In a series of studies, Fiske et al. (1999; 2002) tested and found support to their arguments regarding (1) the fundamental dimensions, showing that contents of various stereotypes could be depicted on the competence and the warmth dimensions; (2) the social structural predictors of competence and warmth attributions, proposing that perceived status of groups predicts their competence, while competitiveness of groups is related to lower warmth attributions; (3) specific kinds/clusters of stereotypes, suggesting that social groups are viewed as residing in either one of the univalent stereotype clusters, i.e. high competent and high warm (HC/HW), low competent and low warm (LC/LW), or one of the ambivalent clusters, i.e. high competent and low warm (HC/LW) and low competent and high warm (LC/HW); (4) specific intergroup emotions stemming from these specific stereotype clusters, indicating that individuals feel admiration for HC/HW groups, contempt for LC/LW groups, envy for HC/LW groups and pity for LC/HW groups. However, following studies revealed inconsistent findings questioning the strength of the competition-warmth link (Aktan & Güvenç, 2008; Cuddy et al., 2009; Durante, 2008), the necessity of social structural variables to shape ambivalent stereotype contents (Judd, James-Hawkins, Yzerbyt, & Kashima, 2005), and the cognitive bases of competence and warmth attributions (Harris & Fiske, 2007; Wade & Brewer, 2006; White & Gardner, 2009). These inconsistent findings require reconsidering the meanings conveyed in the attributions on the competence and warmth dimensions, which seem to lead Cuddy et al. (2009) to re-conceptualize competence and warmth as evaluative dimensions rather than a kind of a cognitive structure, and to justify priority of these evaluative dimensions over any other possible evaluative dimensions to explain intergroup perceptions (Cuddy, Fiske, & Glick, 2009; Fiske, Cuddy, & Glick, 2007). However, admitting evaluative nature of the competence and warmth dimensions would eventually raise the question whether individuals'

evaluations about groups' competence and warmth corresponds to specific cognitive processes and whether these evaluations are open to the motivational concerns.

The present dissertation aimed to investigate these questions in two related sections. The first section addressed the cognitive underpinnings of mixed stereotypes. In this section, discussions related to implicit stereotypes and measurement concerns were presented. By doing this, malleability of implicit stereotypes and their reconstructive nature were discussed in relation with their underlying cognitive processes. In light of these discussions, it was suggested that incompatible findings regarding to implicit mixed stereotype contents (i.e. implicit HC/LW and LC/HW stereotypes) could be reconciled by considering measurement contexts of implicit tasks and their corresponding cognitive processes. Thus, it was hypothesized that implicit mixed stereotypes would emerge in cognitive interference measures in which the measurement context is comparative. In four studies, implicit measurement context was manipulated to test this hypothesis. In the second section, the focus was shifted from cognitive processes to motivational tendencies. In this section, findings related to compensatory relation between competence and warmth dimensions were presented. Accordingly, comparison and compensation was suggested as the motivational basis of mixed stereotypes. In the framework of System Justification Theory, it was hypothesized that individuals tend to compensate low status groups' unprivileged position on competence dimension by increasing their warmth ratings toward those groups. In two studies, compensatory relation between competence and warmth dimension were investigated in relation with system justifying ideologies.

CHAPTER 2

COGNITIVE BASES OF MIXED STEREOTYPE CONTENTS

Since the term "Stereotype" was first introduced by a journalist, Walter Lippmann (1922, as cited in Ashmore & Del Boca, 1981) to explain how preconceptions affect intergroup perceptions, the representation account dominated the literature of stereotypes and prejudice. Beginning with Katz and Braly's (1933) pioneering study, stereotypes were formulized as a collection of attributes regarding to trait like characteristics of social groups. Following studies directed by social cognitive tradition adapted representation account to explain stereotyping and the stereotype effect on cognitive processes (Ashmore & Del Boca, 1981).

Even though there are still significant debates on the questions of where these beliefs originated from, and consequently how they could be changed to improve intergroup relations, the conceptualization of stereotypes has in large part focused on rigidity or cross-situational stability of these belief systems or representations (Ellemers & Van Knippenberg, 1997). For instance, the apparent decline in prejudiced attitudes of European Americans toward African-Americans and women in 1970s was not simply regarded as a change in stereotypes, but a reflection of individuals' attempts to hide their "true attitudes" (Brauer Wasel, & Niedenthal, 2000). Undoubtedly, ongoing discriminative practices in 1970s were a reason leading social scientists to question the observed milder attitudes (McConahay, Hardee, & Batts, 1981). However, scientific consensus on fixed and rigid nature of stereotypes was another significant reason. Thus, indirect measures, such as Modern Racism Scale (McConahay et al., 1981), the Subtle Prejudice Scale (Pettigrew & Meertens, 1995), the Modern Sexism Scale (Swim, Aikin, Hall, & Hunter, 1995), and the Ambivalent Sexism Inventory (Glick & Fiske, 1996) were developed to assess the presumably covert forms of prejudice. By the aim of these measurements, participants' "true"

level of prejudice was assumed to be revealed, instead of their attempts to be seen as less prejudiced.

Even these more subtle measures, however, were quite vulnerable to self-presentational issues (Brauer et al., 2000). Despite the fact that the purpose of the scales was not necessarily obvious to the respondent, it was argued that target out-groups (e.g., Blacks or Women) and questions about these out-groups was certainly transparent (Fazio, Jackson, Dunton, & Williams, 1995). For that reason, participants could still control their ratings in these indirect measures so as to present themselves in a favorable light.

By the raise of cognitive orientation and advanced measurement techniques, scholars of prejudice have developed implicit measures in which individuals' deliberate control on their responses were limited by presenting the group labels out of their awareness or by reducing available cognitive resources. By this way, researchers attempted to assess automatic evaluative responses to social groups (De Houwer et al., 2009; Fazio & Olson, 2003; Greenwald & Banaji, 1995). The automatic (negative) responses triggered by subliminal/supraliminal exposure of a specific group member or a group label were held to be an indicator of the prejudiced beliefs. Thus, it is assumed that participants' "true level of prejudice" could be assessed, since they would be unaware of what was measured and/or they could not control their prejudiced responses. Furthermore, implicit tasks were also regarded as more sensitive measurement techniques which could capture individuals' more spontaneous responses in daily life (Cunningham, Preacher, & Banaji, 2001; De Houwer, 2003; Fazio & Olson, 2003).

Even though implicit measures were celebrated with a fervent interest in the literature of prejudice, these new measurement techniques have come along with their own problems. First of all, there is a strong disagreement about what is measured in implicit tasks (Brauer et al., 2000; Hofmann, Gawronski, Gschwendner, & Schmitt, 2005). Giving that implicit and explicit measures are weakly or insignificantly correlated, it is not clear whether these two different measurement

techniques tap to the same construct or two different constructs. In the latter case, it would be necessary to question which measurement technique reflects the "true" prejudice. Secondly, it is not clear how implicit tasks measures individuals' stereotypes and prejudiced thoughts. Considering variety of implicit procedures, it is also questionable that whether implicit tasks could be used interchangeable or different implicit measures assess different aspects of prejudice (De Houwer, Teige-Mocigemba, Spruyt, & Moors, 2009).

2.1 The "What" Question of Implicit Stereotypes

In general, implicit measures presumably assess automatic features of psychological processes (De Houwer et al., 2009; Fazio & Olson, 2003). In this sense, implicit tasks are aimed to measure the strength of association between a group label and certain trait-like characteristics (Greenwald et al., 2002; Schneider, 2004). For instance, the facilitation in recognition of a negative word following the subliminal presentation of the word "Black" is accepted as a reflection of unfavorable evaluations toward African-Americans (Fazio & Olson, 2003). In this sense, there should be a correspondence between implicit task performances and explicit evaluations.

Several studies indicated that the relation between implicit and explicit measures is either lower than expected or not exist at all. Some researchers interpreted these findings as a reflection of the two different constructs (Brauer et al., 2000). For instance Devine (1989) suggested that implicit measures capture extrapersonal beliefs, i.e. the cultural stereotypes which were learnt and internalized very early in life, while explicit measures are more likely to reflect personal beliefs which are deliberately elaborated and consciously available.

An alternative approach holds that implicit and explicit measures assess precisely the same thing. That is, implicit measures assess the internalization of the prejudice, or extrapersonal beliefs, which is reflected in the explicit measures. The low correlation between implicit and explicit measures, however, could stem from the differences in

procedures or self-presentational concerns which explicit ratings are presumably more vulnerable (Fazio & Olson, 2003). Furthermore, implicit measures seem also to assess other cognitive processes irrelevant to stereotypes and prejudice (De Houwer, et al., 2009). For instance, salience asymmetries (Rothermund & Wentura, 2004; Rothermund, Wentura, & De Houwer, 2005) similarity (De Houwer, Geldof, & De Bruycker, 2005), cognitive abilities (McFarland & Crouch, 2002), response biases (Conrey, Sherman, Gawronski, Hugenberg, & Groom, 2005) and semantic meaning or co-occurrence associations rather than evaluative association could shape individuals' implicit task performance (De Houwer et al., 2009).

2.2 The "How" Question of Implicit Stereotypes

Several implicit procedures have been developed since Fazio, Sanbonmatsu, Powell, and Kardes (1986) introduced the first implicit prejudice measure, i.e. affective priming task. In general, implicit procedures differ in terms of how the prime stimuli are presented (i.e. subliminally or supraliminally), aspects of prime stimuli (i.e. category label, names of category members, pictures of category exemplars), response characteristics (i.e. superficial responses such as lexical decision or more in-depth decisions such as judging evaluative connotation of a word), and awareness (i.e. whether participants are aware that their stereotypes or their level of prejudice is measured; see Brauer et al. (2000) and De Houwer (2003) for a detailed description and discussion of implicit measures).

A number of accounts were suggested to explain how an implicit task measures individuals' stereotypes and prejudice. One of the most common accounts is spread of activation. Drawing on associative memory models, spread of activation suggests that implicit measures, especially priming task, prime one node (i.e. category label) in the associative memory and assess the facilitative effect of that priming in the activation of a semantically related node (i.e. a trait or evaluative connotation; Greenwald el al., 2002). Another common account is response activation (De Houwer, 2001; 2003) or response interference (Gawronski, Deutsch, & Seidel, 2005). Drawing on the general notion of response compatibility (Hasbroucq, Guiard,

& Kornblum, 1989), implicit measures, especially categorization tasks, such as Stroop task and IAT, assess the relative strength of two independent response tendencies. Considering the IAT, for instance, it could be seen that stimulus and response tendencies are compatible on some trials (i.e. flowers and good) and incompatible on other trials (insects and good), which results in synergistic effects in the first case, but antagonistic effects in the latter case (De Houwer, 2003; Gawronski et al., 2005).

On this basis, Schneider (2004) categorized implicit measures as direct association measures such as Lexical Decision Task and Affective Priming, and cognitive interference measures such as the Stroop Task and IAT. In a similar vein, Brauer et al. (2000) suggested that implicit measures could be categorized in terms of whether they assess activation or application of prejudice. They argued that prejudice could be defined as accessing negative concepts immediately on a contact with a member of outgroup, or as implicit expression of biased thoughts or feelings when drawing an inference about or attributing character traits to outgroup members. Following from this point, they argued that situational variables and individual differences could regulate whether an activated concept is subsequently used in later judgment or behavior. In line with Schneider' (2004) distinction, they suggested that direct association measures are more applicable for assessing the activation, while cognitive interference measures are more suitable for application. Furthermore, they advance their categorization by including explicit measures as the measure of individuals' derogatory beliefs toward members of certain outgroups.

Brauer et al.'s (2000) arguments have significant implication. On the one hand, they underline that two implicit measures differing in terms of their corresponding cognitive processes should not be used interchangeably. On the other hand, they provide a conceptual tool to overcome a significant limitation of the studies on stereotype activation and application. That is, such studies rely heavily on two qualitatively different measures, i.e. implicit measures for activation and explicit measures for application (Kunda & Spencer, 2003). The only support Brauer et al. (2000) provided for their argument was the construct validity of their three

component approach. That is, they investigated the relationships among the scores gathered from four implicit and two explicit measures. Their findings supported three-factor solution (explaining 79% of variance) in which two explicit ratings were in the first factor, two direct association measures (i.e. Lexical Decision Task and Adjective Evaluation Task) were in the second, and one cognitive interference measure (i.e. Category Inclusion Task) was in the third. Innes-Ker and Niedenthal (2002) provided a support for predictive validity of activation-application distinction by showing that priming a concept of negative or positive emotion resulted in heightened accessibility of the target emotion (i.e. activation of related knowledge structure), but it did not cause emotion-congruent social judgment (i.e. application of related knowledge structure).

In sum, studies probing the "how" and "what" questions revealed significant aspects of implicit measures. First of all, implicit measures seem not to be the best measurement technique which is free from intervening variables. In this sense, they should not be regarded as a direct reflection of individuals' "true prejudice". In fact, implicit measures might simply reflect a certain component of stereotypes, i.e. activation and application of stereotypes. Once a stereotype is activated by encountering a member of the stereotyped group, application of that stereotype to the group member depends on several motivational (Kunda & Spencer 2003) and contextual factors (Barden, Maddux, Petty, & Brewer, 2004). Even though the stereotype was applied to the member of the group, it does not necessarily shape explicit evaluations and judgments (Fazio & Olson, 2003). In this respect, arguments regarding to the "true prejudice" seem invalid. Recent studies on malleability of implicit stereotypes advance these discussions and question the underlying assumption that stereotypes are fixed and rigid knowledge structures. On this basis, Ellemers and Knippenberg (1997) argued that stereotypes are "collection of possibly relevant group attributes, which delimit the boundaries within which the stereotype may vary". Encountering a member of an outgroup, consequently, individuals would pick out the most meaningful and informative attributes in a specific context. In this sense, stereotypes should not be rigid structures buried in cognitive architecture; rather they should be adaptive and bound to the given context.

2.3 Contextual Influences on Implicit Stereotypes

Ellemers and Knippenberg (1997) identified four contextual sources of variation in individuals' intergroup perceptions: (1) the salience of social categorization (i.e. which category membership of a person is activated in a given context), (2) perspective of perceiver (i.e. a group member or just a bystander), which would affect individuals' degree of involvement, (3) established differences between groups (i.e. restriction of social reality which is defined by the status of the groups in the intergroup context), and (4) the relevance of stereotypic dimensions on which groups are evaluated (i.e. whether unidimensional or multidimensional intergroup comparisons are made, and whether the evaluation dimension is related to the status of the target groups). Ellemers and Knippenberg (1997) argued that all these contextual variables in combination shape individuals' group perception, and consequently stereotypes could not be a fixed and enduring "pictures in our heads". Even though there is a good deal of support for effects of these contextual variables on explicit stereotypic evaluations (Ellemers & Van Kinppenberg, 1997), the supports from implicit measurements are limited to the first contextual variable, namely the salience of social categorization.

Many studies indicated that contextual factors could affect activation and/or application of stereotypes (Bodenhausen, Todd, & Richeson, 2009; Mitchell, Nosek, & Banaji, 2003). In some of these studies the measurement contexts of implicit tasks was manipulated to investigate the underlying mechanism of stereotyping (De Houwer et al., 2005; Gawronski et al., 2005; Rothermund & Wentura, 2004; Scherer & Lambert, 2009). In other studies, malleability of stereotypes was directly examined by manipulating the experimental context (Dasgupta & Greenwald, 2001; Lowery, Hardin, & Sinclair, 2001; Macree, Bodenhausen, & Milne, 1995; Wittenbrink, Judd, & Park, 2001) or the measurement context (Mitchel, Nosek & Banaji, 2003).

As a general finding, these studies indicated that contextual manipulations have an impact on which part of the stereotype will be activated. For instance, Lowery et al.

(2001) showed that experimenters' ethnicity influenced European-American participants' automatic prejudice measured by IAT and the subliminal priming procedure, such that they exhibited less automatic prejudice in the presence of an African-American experimenter than a European-American experimenter. Even though findings of Lowery et al. (2001) indicate that individuals may exert some level of control over implicit stereotypes, other studies pointed out that the context could trigger a certain part of the stereotype. Using IAT and the sequential priming task, for instance, Wittenbrink et al. (2001) showed that exposing participants to African-American exemplar in a positive context (i.e. in a family barbeque or in a church interior) reduced implicit prejudice. Similarly, Barden et al. (2004) found that presenting an African-American in positive roles (e.g. as a lawyer rather than a prisoner) resulted in decreased implicit prejudice. More importantly, in a lexical decision paradigm, Macrae, Bodenhausen, and Milne (1995) showed that when the experimental context was manipulated to direct participants' attention to either ethnicity or gender information which were visually available at the same time (i.e. presentation of a Chinese woman on a videotape), only that focal dimension was activated (e.g. ethnicity when the Chinese woman was shown as eating with chopsticks). More interestingly, the alternative categorical dimension (i.e. gender when attention was directed to ethnicity) was not merely disregarded, but rather was actively inhibited.

Findings of these studies seem to parallel to cross-categorization studies, showing that when multiple categorizations are available, directing attention to the positive category may reduce prejudiced evaluations (see Brewer, 2000). Since, all these studies used exposure to an exemplar; they provide little evidence about how participants constructed their stereotype toward the target group. That is, whether their positive implicit attitudes were a reflection of the positive attitude toward the exemplar or the whole group. More direct evidence was provided by Mitchel, Nosek and Banaji (2003), showing that contrasting multiply categorizable target, namely Black Women, by manipulating the distracters in IAT and GNAT resulted in positive attitudes when the contrasting category was Men and negative attitudes when the contrasting category was White. That is, the very same exemplars triggered positive

attitudes when they were categorized as a woman, but negative attitudes when they were seen as an African-American.

Even though these studies provide sound evidence for the contextual influences on implicit stereotypes, it is questionable whether their findings represent the constructive nature of stereotypes or just an activation of the subtypes (Ellemers & Knippenberg, 1997). Given that activating one aspect of a specific stereotype (i.e. Women when the target group is African-American Women) does not assure a change or reconstruction of the stereotype, more studies are necessary to investigate whether the very same stereotype could be reconstructed in line with contextual influences.

Another significant aspect of these studies is their reliance on only one evaluation dimension, i.e. positivity-negativity. Applying the fundamental dimensions suggested in SCM, however, would provide more detailed picture of stereotype reconstruction at an implicit level. For instance, differing impacts of contextual manipulations on competence and warmth would shed a light on (1) how implicit mixed stereotypes are constructed at implicit level, and (2) the meaning conveyed in competence and warmth attributions. However, only limited number of studies investigated implicit competence and warmth stereotypes, and their results were quite incompatible. For a detailed discussion of these findings, the conceptual definitions of competence and warmth dimensions, and their operationalization in implicit task is presented in the following section.

2.4 Conceptual Definition of Competence and Warmth

Fiske et al. (1999; 2002) adapted competence and warmth dimensions from the person perception field to the intergroup domain (see also Alexander et al., 2005; Phalet & Poppe, 1997). Wojciszke (1994, see also Abele & Wojciszke, 2008) provides a functional analysis of the fundamental dimensions which he labeled as agency (competence) and communion (warmth). The agency and the communion dimensions originates from Bakan's (1966) philosophical argument regarding to

"two fundamental modalities in the existence of living forms, agency for the existence of an organism as an individual and communion for the participation of the individual in some larger organism of which the individual is part" (pp. 14–15 as cited in Abele and Wojciszke, 2008; see also İmamoğlu, 2003 for a related discussion in the self-construals domain). Abele and Wojciszke (2008) maintain this argument and suggest that individuals perceive and evaluate themselves in a way that maximizes their own interest. In this sense, people are acting selves and observing others. Underlying the importance of the difference between self and other perspectives for perception, Abele and Wojciszke (2008) suggest that actors need to anticipate others' intentions toward them by inferring their communion (warmth), and then to know others capability to pursue their intentions by assessing their agency (competence). Hence, it is more important to infer others' intention than capability, since others' intentions have direct impact on the perceiver (Wojciszke, 1994). However, changing the perspective from others to the self, it would be apparent that possessing agency related traits is more important for the perceiver, since agency related traits have direct consequences for the possessor (the perceiver) and perceivers could not have bad intentions toward themselves (Abele & Wojciszke, 2008; Wojciszke; 1994; 2005)

Fiske et al. (2002) maintain these arguments regarding to the competence and warmth dimensions in their conceptualization of stereotype contents. SCM agrees with the definition of the competence dimension in other theorizations and operationalizes this dimension as how competent, confident, capable, efficient, intelligent and skillful members of a certain group are seen. However, their definition of warmth slightly differs from other theoretical perspectives in terms of their emphasis on intention, rather than morality or sociability. SCM suggests that the warmth dimension comprises of the other-profitable traits operationalized as how members of groups are viewed as friendly, well-intentioned, trustworthy, warm, good-natured and sincere (Fiske et al., 2002). These conceptualizations are also reflected in the social structural predictors hypothesis of SCM (Fiske et al., 2002). Given that status is directly related to one's capability, a group should be viewed as competent as they occupied high-status and prestigious positions or jobs in society.

Similarly, members of competitive groups would not be seen as warm, since their struggle for ingroup's limited sources would reflects their ill intention (Fiske et al. 2002; see also Brewer, 1999).

2.5 Operational Definition of Competence and Warmth at Implicit Level

Given that, the warmth dimension has a priority in both intergroup perceptions and behaviors, this dimension should have somehow cognitive and/or neurological basis. Harris and Fiske (2007) tested this hypothesis by examining medial pre-frontal cortex (mPFC) activity for the groups in specific stereotype clusters. Their findings showed that judgments regarding to members of LC/LW groups are processed in a region anatomically distinct from the social groups which are stereotyped as LC/HW, HC/LW and HC/HW. The reduced mPFC activity for LC/LW groups indicated that the groups which elicit disgust (e.g. homeless people and welfare recipients) are stereotyped in a dehumanized manner. Even though, these findings supported SCM's suggestions regarding to LC/LW groups, it is not clear why judgments about the members of HC/LW groups who were also rated as lower on the warmth dimension did not reduced mPFC activity.

In another line of studies, mixed stereotype contents were investigated with various implicit tasks. The logic behind these studies was that the strengths of associations among stereotypical trait attributions (i.e. competence and warmth) and group labels would differ for mixed stereotyped groups. That is, considering the HC/LW groups, for instance, one would expect a stronger association between competence-related traits and the group label but weaker association between warmth-related traits and the group label. Furthermore, if HC/LW groups are seen as competent because of their status and cold because of their ill intentions, then negative competence related traits would be loosely associated with group label, while the association between negative warmth related traits and group label is stronger. A reversed pattern would be expected for LC/HW groups

Wade and Brewer (2006) tested these suggestions in two studies. In their first study, they asked participants to assign both competence and warmth related traits into female subgroups. Their findings showed (1) that there is a significant correspondence between female and male participants, indicating consensus beliefs about female subgroups and (2) that competence and warmth are the primary dimensions differentiating female subgroups. In their second study, Wade and Brewer (2006) conducted a lexical decision task (LDT) to assess whether competence-related traits are more strongly associated with businesswomen (i.e. HC/LW group) than homemaker (i.e. LC/HW group), while strength of the association of warmth-related traits is higher for homemakers. However, their findings did not support this pattern. The competence and the warmth dimensions did not differentiate for businesswomen and homemakers at an implicit level. Instead, participants' evaluations toward businesswomen and homemakers were shaped by the valence of traits. That is, more positive traits were associated with homemakers, especially by male participants.

In another study, White and Gardner (2009) used a gender salience paradigm and asked their participants to complete a modified Stroop Task in which they required their participants to name the color of the competence or warmth related words while neglecting the meaning of the words. Their findings showed that participants in the woman (LC/HW) salience condition had longer response times to warmth related words than to competence related words, while participants in the male (HC/LW) salience condition showed the opposite pattern. That is, participants associated female category with warmth related traits, while associating male category with competence. However, they failed to show the association between female category and incompetence, as well as the association between male category and cold. Thus, their findings provided partial support for SCM by showing that individuals tend to associate gender categories with only traits those are associated with the positive side of the relevant gender stereotype, but not the negative one.

In a related vein, Carlsson and Björklund (2010) conducted Implicit Association Test (IAT) sessions to test whether fundamental dimensions would differentiate lawyers

(HC/LW group) and preschool teachers (LC/HW group). In two separate Single-Attribute IAT sessions, they used competent-incompetent and warm-cold as attribute categories. Their findings were in the expected direction, showing that participants were faster in sorting competence related traits for lawyers when competence-lawyer and incompetence-preschool teacher pairs were contrasted, and in sorting warmth related traits for preschool teacher when warmth-preschool teacher and cold-lawyer pairs were contrasted. Since, the scoring procedure of the IAT requires calculating a difference score of RTs in the positive and negative attribute blocks, however, Carlsson and Björklund did not examine the implicit stereotype dimensions on the negative side of the stereotype contents.

The findings of these four studies reveal a puzzling picture regarding to the cognitive underpinnings of stereotype contents. Firstly, Harris and Fiske's (2007) neuro-imaging study does not provide a clear-cut picture of how LW groups are processed in brain, since HC/LW did not differ from LC/HW and HC/HW groups. Secondly, studies using implicit procedures resulted in contradictory findings. While one implicit procedure provided a straightforward support for fundamental dimensions at implicit level, the others yielded a partial support or no support at all. Considering the variety of the target groups used in these studies, on the one hand, it could be argued that individuals' evaluations on fundamental dimensions do not necessarily correspond to the strength of the association between group labels and the traits for all possible mixed stereotyped groups. However, it should be noted that the in explicit ratings the target groups of these studies were qualitatively similar in term of the stereotype clusters that they correspond to. While the businesswomen in Wade and Brewer (2006), men in White and Gardner (2009), and lawyers in Carlsson and Björklund (2010) were members of the HC/LW cluster, homemakers, women and preschool teachers, respectively, were in the LC/HW cluster. On the other hand, a closer look to the differences of the implicit procedures used in these studies would reveal a theoretically more interesting picture of implicit stereotype contents.

2.6 Implicit Competence and Warmth at Activation and Application Levels

Even thought, the IAT, LDT and Stroop Task are similar in terms of their aims to measure the strength of the association between a group label and a trait attributes, they significantly differs in terms of their procedures, and consequently, of the cognitive processes that they correspond to. Considering Schneider's (2004) classification of implicit measures, it could be seen that LDT is a direct association measure, which is more sensitive to non-goal dependent automatic activation of stereotypes (Brauer et al., 2000; Wade & Brewer, 2006; see also Bargh, 1994 for a detailed discussion of conditional automaticity in social cognition). Conversely, IAT and Stroop Task are cognitive interference measures, which are presumably more sensitive to goal-dependent automatic processes of stereotype application (Brauer et al., 2000; De Houwer, Beckers, & Moors, 2007; Neumann & Seibt, 2001). In this respect, studies of implicit stereotype contents indicate that implicit competence and warmth dimensions occur at the application level. In fact, the present conclusion is in line with Cuddy et al.'s (2009) re-conceptualization of competence and warmth as evaluative dimensions. Given that activation of a category does not guarantee the activation of a relevant evaluation, application of stereotypes should be more strongly correlated with participants' explicit evaluations (Neumann & Seibt, 2001). In line with this argument, Carlsson and Björklund (2010) found a moderately low correlation between implicit and explicit competence ($r(43)= .32$, $p<.05$), but a non-significant correlation between implicit and explicit warmth ($r(42)= .11$, $p=.48$).

The distinction of activation and application of implicit stereotypes seems to explain incompatible findings regarding to implicit competence and warmth. However, it should be noted that the implicit procedures used in these studies were quite different. For instance, even though the Stroop Task and IAT are cognitive interference measures, they are quite dissimilar in terms of how the target group is presented and how the strength of association is measured. In the Stroop task, the target groups were primed supraliminally (White & Gardner, 2009), while the target groups were presented explicitly in IAT (Carlsson & Björklund, 2010). Furthermore, IAT measures the relative strength of associations of target groups with a target

attribute. That is, IAT measures whether the association between preschool teachers and warmth, for instance, is stronger than the association between lawyers and warmth (Carlsson & Björklund, 2010; see Greenwald, Poehlman, Uhlmann, & Banaji, 2009). However, Stoop Task measures the absolute strength of association with a target group and target attribute.

Considering the dissimilarities among the procedures used to assess implicit competence and warmth, it seems questionable to compare the findings of previous studies on implicit stereotype contents. To overcome these dissimilarities, a single task should be conducted to assess implicit stereotype contents at both activation and application level. Such a golden path between direct association and cognitive interference measures could be the Go / No Go Association Task (GNAT; Nosek and Banaji, 2001).

2.7 Measuring Implicit Competence and Warmth at Activation and Application

GNAT is developed as an alternative of IAT to assess the absolute strength of association and its procedure is quite flexible in terms of how the target groups and target attributes are presented (Nosek and Banaji, 2001). In a standard GNAT, participants are required to decide whether a stimulus presented at the middle of the screen belongs to one of the target or the attribute categories presented at the top of the screen. GNAT allows researchers to manipulate the comparative context by arranging the distracters in a comparative or a non-comparative manner. That is, the distracters could be chosen from opposite category (e.g. homemakers when the target category is businesswomen), superordinate category (e.g. women when the target category is businesswomen) or general category (i.e. various unrelated objects when the target category is businesswomen). By this way, implicit measurement context could be arranged to assess the relative strength of two response tendencies as in cognitive interference measures, or association of target category and target attribute as in direct measures of activation. For instance, in an incompatible block of Single Category GNAT (i.e. GNAT with distracters from opposite category), two possible responses to the distracter are “No Go”, since it does not belong to the target

category; and “Go”, since it is related to the target attribute. However, incompatible blocks of General and Superordinate Category GNAT, the only possible response for the distracter is “No Go”, since the distracter is not related to the target attribute.

GNAT has been shown to be a valid measure of implicit attitudes (Nadarevic & Erdfelder, 2011; Nosek and Banaji, 2001; Teachman, 2007) and implicit personality (Boldero & Rawlings, 2007). It was also shown that GNAT is a proper tool to study malleability of implicit stereotypes and automatic associations (Mitchell et al., 2003; Nadarevic & Erdfelder, 2011). Furthermore, GNAT has also moderately high reliability (Williams & Kaufmann, in press). However, no studies compared the cognitive processes underlying three variants of GNATs. For that reason, no empirical evidence has been provided for the notion that Single Category GNAT is suitable for assessing activation, while Superordinate and General Category GNATs are more appropriate for application. The present PhD dissertation is the first attempt to test this notion.

In sum, implicit stereotype contents seem to emerge in cognitive interference measures, which are supposedly a measurement of application of stereotypes. To test this prediction, measurement context was manipulated in four GNAT studies. Following Wade and Brewer (2006), businesswoman and homemakers were used as target categories to show that implicit stereotype contents emerge even for these target groups. The findings of GNAT studies would also shed light on the discussions on malleability of implicit stereotypes, by showing that the implicit stereotype of a very same group, but not cross-categorized aspect of that group, could be constructed differently in respect to the given measurement contexts. That is, businesswomen would be associated with competence more strongly when that group was contrasted with homemakers in Single Category GNAT and vice versa. Furthermore, the impact of context manipulation would clarify whether implicit competence and warmth occurs at activation or application level, or either levels. In this respect, the following research questions were examined:

Q1: Do stereotype contents occur in individuals' categorization performance (i.e. GNAT performance) when the categorization context does not provide any comparison clue for the two target groups?

Q2: Do stereotype contents occur in individuals' categorization performance when two target groups are presented in a comparative context in which a group is presented as the target and the other group is presented as a distracter?

Q3: Do stereotype contents occur in individuals' categorization performance when competence and warmth dimension are presented in a comparative context in which a dimension is presented as the attribute category and the other dimension is presented as a distracter?

CHAPTER 3

MOTIVATIONAL UNDERPINNINGS OF MIXED STEREOTYPE CONTENTS

Findings of the studies related to the implicit stereotype contents indicate that implicit mixed stereotype contents emerge in comparative contexts in which presentation of both target groups trigger two incompatible response tendencies. The effect of the comparative context could be found not only in implicit task performance but also in explicit ratings. For instance, Judd et al. (2005) provided direct evidence for the comparative processes underlying ambivalent stereotypes. In a series of experiments, Judd et al. (2005) presented behavioral information about an artificial group's competence or warmth, and they asked their participants to rate the group on both dimensions. Their findings were straight forward, showing that (1) when participants were required to rate only one group with high competent behaviors and neutral warmth behaviors, or vice versa, the Halo Effect emerged, i.e. the group presented as high on one dimension is also perceived as high on the other dimension, (2) when participants were required to rate two groups behaviorally differing in terms of their competence (or warmth), however, the Compensation Effect occurred (i.e. a negative correlation between participants' competence and warmth ratings), showing that participants compensated their lower competence (warmth) ratings for behaviorally low competent (warm) group by exaggerating their warmth (competence) ratings toward that group, (3) the compensation effect also occurred in participants free recall performance, showing that participants misremembered warmth (competence) related behaviors for low competent (warm) group (see also Yzerbyt, Nicolas, & Judd, 2008 for further support for compensation on competence dimension, but not another unrelated dimension, namely healthiness dimension).

The findings of Judd et al. (2005) clearly showed that a significant source of ambivalent stereotypes could be individuals' comparison and compensation tendencies. However, the negative correlation between competence and warmth dimensions is not a common finding of SCM studies. For instance, when participants were required to compare two real groups in school setting (achieving and underachieving students; Aktan & Güvenç, 2008) or when the stereotypes toward current groups in Italian Society were considered (Durante, 2008) a strong and positive correlation emerged between competence and warmth ratings. Even, Yzerbyt, Provost, and Corneille (2005) failed to find a negative correlation when they required their Belgian and French participants to compare their ingroup and outgroup to investigate the compensation effect.

The inconsistency between these two lines of studies could stem from methodological issues. Differing from Judd et al. (2005), these researchers required their participants to rate already existent groups and they did not presented behavioral information about the target groups. These differences might affect participants' ratings in several ways. First of all, the manipulated dimension in Judd et al.' study (2005) might be viewed as quite objective and participants could construct their ratings on the other dimension by using the manipulated dimension as an anchor. That is, knowing that a group is clearly competent, participants might reserve their warmth ratings for the other group. However, considering the real groups, participants ratings on one dimension would not necessarily depends on their ratings on the other dimension; but their already existent knowledge about the groups. That is, participants might consider not only their previous ratings on the other stereotypic dimensions, but also several related issues such as target groups' status and competitiveness (Fiske et al., 2002), social sensitiveness of the issue (i.e. whether saying something good or bad about the target groups is socially desirable, Greenwald & Banaji, 1995) and/or social identity issues (i.e. whether one of the target group is perceiver' ingroup or reference group; Hewstone, Rubin, & Willis, 2002). Similarly, individuals might not make within-group comparisons for real groups, which would result in the negative correlation (e.g. comparing businesswomen's competence and warmth), since they already have existing

knowledge about these groups' competence and warmth. Finally, it would be also argued that the positive correlation could be a methodological artifact. Given that the competence and the warmth dimension has always been presented as two subscales of a stereotype content scale, in which all items are in the same direction, participants could try to be consistent on their ratings. Thus, the positive correlation would be more likely to emerge in individuals' ratings, rather than a negative relation.

All these arguments require reconsidering the definition of compensation. Cuddy, Norton, and Fiske (2005) underline the compensatory nature of mixed stereotypes and they suggest that an evaluation toward a group would reflect a mixed stereotype (1) when this group evaluated as significantly higher on one dimension but lower on the other dimension than the other comparison group(s), and (2) when the difference between individuals' ratings on these two dimensions is significant. Even though, Cuddy, Norton and Fiske (2005) did not include negative correlation to their definition of mixed stereotypes, they imply such a correlation to explain why system justifying mixed stereotypes are resistant to change. To explain the lower warmth ratings toward a competent elder in their study, they explicitly admitted that any competent member of a LC/HW groups would suffer from losing the carrot provided to keep them in their lower status.

Judd et al. (2005) incorporated negative correlation between competence and warmth dimension to the definition of mixed stereotypes. In a related vein, Yzerbyt et al. (2005) suggest that compensation tendency would be reflected in the positive correlation between the competence ratings toward high status groups and the warmth ratings toward low status groups. That is, admitting high status groups' competence, individuals would compensate unprivileged position of low status group by exaggerating that group's warmth. In this sense, compensation could not simply be captured by examining the significant differences between the competence and the warmth ratings toward target groups. In fact, such differences could stem from shared beliefs about the target groups. For instance overweight people could be viewed as warm regardless of whether thin people are viewed as competent or not. Therefore, the correlation between competence and warmth ratings toward HC/LW

and LC/HW groups should be examined to appreciate individuals' compensation tendencies. However, requiring individuals to simply rate two target groups is not sufficient to investigate the compensation tendency, since such a method would hinder the comparison tendency underlying compensation effect. A more complicated methodological approach is necessary to study comparison and compensation effects in a conjunction.

The unexpected order of presentation effect occurred in some SCM studies could provide an opportunity to study comparison and compensation effects separately. For instance, Oldmeadow and Fiske (2007) investigated the moderating role of the system justifying ideologies for the status-competence link and they found an order of presentation effect, showing that participants exaggerated their warmth ratings for low status group when high status group (i.e. the more competent group) is presented first. A similar effect was also seen on participants' competence ratings. Their findings showed that the high status group was seen as more competent when this group was presented in the second order. All these findings indicated that participants contrasted the second group, which they did not know that they would come across, and then they exaggerated their second ratings on the dimension which is relevant to the second target group (see Aktan and Güven (2008) for a similar pattern in the ratings toward achieving and under-achieving students in a secondary school setting). However, it is not clear whether the compensation tendency lead participants to balance their rating or they simply compared two groups and meta-contrast principle shaped their perceptions. In the first case, the competence and the warmth ratings should be positively cross-correlated, such that there would be a positive correlation between high status group's warmth and low status group's competence, and vice versa. However, in the second case, direct correlations should be seen between two groups' competence and warmth, such that competence ratings toward high status group would increase, as competence ratings toward low status group increased. Since, Oldmeadow and Fiske (2007) did not examine the correlations among the competence and the warmth ratings toward low and high status groups, these arguments require future investigations.

3.1 System Justification Motivation Guiding the Compensation Tendency

A significant source of the compensation tendency could be individuals' system justification motivation (Glick & Fiske, 2001a; Kay & Jost 2003; Jost & Kay, 2005; Judd et al., 2005). System Justification Theory (SJT) suggests that individuals actively engage in rationalizing the existent social systems defined by the relative status of groups (Jost, Banaji, & Nosek, 2004). Compensatory stereotypes (i.e. mixed stereotypes) provide such a rationalization which ensures that everyone benefits through a balanced dispersion of benefits (Yzerbyt et al., 2008) In this way, compensatory stereotypes explain the relative status of the groups in society (Jost, Kivetz, & Rubini, 2005) while providing warmth as a reward for low-status groups which do not to challenge the status quo (Glick & Fiske, 2001b; Kay & Jost, 2003).

In this framework, system justification motivation could shape individuals' mixed stereotypes in two ways. First of all, individuals seem to actively engage in explaining the status differences by using the competence dimension (Fiske et al., 2002; Jost, Sally, Jeffrey, & György, 2003). That is the explanatory function of stereotypes which is a reflection of meritocratic ideologies (Jost, Glaser, Kruglanski, & Sulloway, 2003; Jost & Major, 2001). Secondly, individuals could also favor low status and unthreatening groups on warmth dimension to compensate their unprivileged position on competence dimension, and disfavor high status groups on warmth dimension to compensate for their over-privileged position on competence dimension (Jost et al., 2005; Judd et al., 2005). That is the compensatory function of stereotypes which reflects the complementary ideologies.

These two functions of stereotypes are rarely differentiated in SCM studies. In fact, Fiske et al. (2002) used these functions interchangeably to explain the status – competence link (i.e. explanatory function) and the source of mixed stereotypes (i.e. compensatory function). However, these two functions point out to individuals' two different problematic: What is the source of existing status differences? How could the balanced dispersion of benefits be sustained by allocating especially the warmth attributions? The only direct evidence for explanatory function is provided by

Oldmeadow and Fiske (2007), showing that system justifying ideologies (i.e. Social Domination Orientation and Belief in Just World) moderated the status – competence link. In none of SCM studies, however, compensation tendency have been studied in relation with system justification motivation.

The findings related to the complementary function hypothesis are quite complicated. In these studies, mixed stereotypes are regarded as a source of system justification motivation (Jost & Kay, 2005; Kay & Jost, 2003) and of perceived legitimacy of intergroup status difference (Jost et al., 2005); or they are simply admitted as the consequence of system justification motivation (Judd et al., 2005) and research efforts has focused on perceptions of the system threatening exemplars (i.e. a businesswoman with a child, Cuddy, Fiske, & Glick, 2004; or a competent elder, Cuddy et al., 2005) in order to examine the possible adverse impacts of interventions to system justifying beliefs.

In the first line of the studies, Jost and Kay (2005) showed that exposure to benevolent sexism and complimentary gender stereotypes result in increased system justification motivation among women (see also Kay and Jost (2003) for complementary stereotypes toward poor and rich). Given that individuals actively engage in rationalizing existent status quo (Jost et al., 2004), however, these studies does not provide evidence for how individuals actively use competence and warmth dimensions to create complementary beliefs or mixed stereotypes. More direct evidence was provided by Jost et al. (2005), showing that complementary stereotypic differentiation (i.e. difference between competence and warmth) mediated the relation between perceived status differences and legitimacy. That is, individuals actively engage in justification of status differences by using competence and warmth dimensions in a compensatory manner. Differing from Jost and Kay (2005), however, Jost et al. (2005) did not provide evidence for the role of the system justifying belief in compensation.

3.2 Restriction of Social Reality as a Source of Mixed Stereotypes

An alternative source of mixed stereotype contents is individuals' need to gain positive identity in the restriction of social reality (Doosje, Spears, & Koomen, 1995; Ellemers & Van Kinppenberg, 1997). Social reality corresponds to shared beliefs about the status of a certain group. In minimal group studies, social reality is usually generated by providing group members false feedbacks about their task performance (Ellemers, Van Rijswijk, Roefs, & Simons, 1997). For real groups, social reality is defined by power and status of the groups, their reputation, or the value attributed to these groups (Alexander et al., 2005)

Differing from SJT, Ellemers et al. (1997) suggest that higher warmth ratings of low status groups could be a reflection of social creativity. That is, members of the low status group tend not to contradict with the social reality defined by relative status of the groups, and they need to gain positive identity by exaggerating warmth ratings toward their ingroup. Similarly, Ellemers, Barreto and Spears (1999) showed that when a group's unprivileged position is defined by intergroup context, i.e. status differences, members of the unprivileged group insure positive differentiation from the privileged group by favoring their ingroup on dimensions irrelevant to status (i.e. warmth) while confirming superiority of the privileged group on dimensions relevant to status (i.e. competence). Thus, restriction of social reality in conjunction with identity concerns could shape ratings of especially low status groups in a way that they would depict mixed stereotypes (Jetten, Spears, & Manstead, 1999).

Even though these arguments suggest an insider perspective which is deliberately avoided in SCM, a support for the restriction of social reality was also observed in the unexpected findings of the cross-cultural SCM study. In this study, Cuddy et al. (2009) showed that European HC/LW nations (e.g. Germany) favored their in-group on competence dimension, while LC/HW nations (e.g. Italy) favored their in-group on warmth dimension. That is, mixed stereotypes emerged in line with social reality and identity concerns.

In an outsider perspective, arguments regarding to the restriction of social reality could be related to the objectiveness of competence and warmth dimensions. In most of the social contexts, groups' competence is defined by the relative status of the groups (Alexander et al., 2005; Fiske et al., 2002; Jost et al., 2003). Furthermore, competence of an individual could be easily inferred from his/her performance on a task or a standardized test. Warmth, however, seems to be more ambiguous dimension, since intention of a positive behavior is not clear. For instance, Reeder and Spores (1983) showed that stiuational demands effected attribution of morality only when the behavior was moral. That is, a negative behavior could easily lead attribution of ill-intention, while a positive behavior would result in questioning the underlying intention. Similarly, the attribution of warmth in intergroup context seems to be bound to the threat imposed by the outgroup (Stephan, Ybarra, & Morrison, 2009). In their now-classical studies, Sherif and Sherif (1969) showed how conflict over limited resources result in attribution of immorality. In this sense, attributions with respect to lack of warmth could be seen as bound to a more objective criterion when intergroup perceptions were shaped by realistic conflict and intergroup threat. However, warmth attributions would have less objective basis when intergroup relations were guided by identity concerns, i.e. social competition, which does not necessarily requires negative attributions to outgroup (Brewer, 1999; Hewstone et al., 2002).

Even though these arguments are in line with SCM's suggestion regarding the social structural predictors of stereotype contents (i.e. relative status predicts competence and intergroup competition predicts coldness), SCM assumes that lack of competition (and threat consequently) would directly increase warmth evaluations. However, the competition-warmth link seems not to be as strong as previously presumed (Aktan & Güvenç, 2008; Cuddy et al, 2009; Durante, 2008). In this sense, warmth could be a more subjective dimension on which higher competence ratings would be balanced or corrected.

The second part of the present dissertation aims to investigate comparison and compensation effects in conjunction with underlying motivations, namely system

justification motivation and restriction of social reality. In order to examine comparison and compensation tendencies separately, the order of the presentation of target groups were manipulated by not informing participants about the second group that they would be asked to evaluate later. The comparison effect was examined by comparing the ratings toward a first group (the no comparison condition) and the second group (compariable to the first group). The compensation tendency, on the other hand, was investigated by examining the correlation between participants' first and second ratings. Then, the role of the system justification motivation in compensation was investigated. Accordingly, the second part of the dissertation focused on three questions:

> Q4: Do individuals compare the groups presented to them in terms of competence and/or warmth?
>
> Q5: Do individuals compensate low-groups' unprivileged position on competence dimension by exaggerating their warmth ratings?
>
> Q6: Do the system justification motivation take a role in compensatory relation between stereotypic evaluations of high-status and low-status groups?

CHAPTER 4

THE OVERVIEW OF THE STUDIES IN THE DISSERTATION

The aim of the present dissertation is to investigate individuals' stereotypic evaluations in a motivation oriented perspective. In doing so, the first part of the dissertation focused on the cognitive bases of competence and warmth dimensions. Specifically, the comparison process, which supposedly prime two competing responses at the application level of stereotypes, was examined as an underpinning of the stereotype contents. In the second part, the focus shifts to the compensation tendency. The aim of this part is to separate compensation from comparison, and clarify the motivational underpinnings of compensation tendency.

4.1 The Cognitive Basis of the Competence and Warmth Dimensions

In the first part of the present PhD dissertation, GNAT was used for investigating implicit stereotype contents. GNAT is a useful research tool, since it enables the manipulation of the comparative context in which the target groups and target attributes are presented. In this respect, GNAT provides a golden path between direct association measures and cognitive interference measures. Furthermore, GNAT is quite similar to IAT in terms of its categorization task, which measures cognitive interference (Schneider, 2004). Supposing that the distracters from the opposite target group would elicit interfering response tendencies in incompatible blocks (e.g. a picture of a homemaker when the target categories are businesswomen and warmth), participants RTs and d scores would mainly shaped by the strength of the two competing responses (e.g. possible responses for the picture of a homemaker are "No Go" since she is not a businesswoman; but "Go" since she is warm). Thus, findings of the dissertation would be comparable with the findings of Carlsson and Björklund (2010), which provided a clear support for the implicit stereotype contents in a cognitive interference measure, i.e. the Single Attribute IAT.

GNAT could also be attuned to measure direct association by presenting target groups and target attributes in a non-comparative manner. Supposing that the non-comparative GNAT does not require an interfering response by presenting a distracter from the contrasting category, participants RTs and d prime scores would mainly depend on stimulus recognition. That is, supraliminal presentation of the target group (e.g. presenting businesswomen as the target category) would facilitate recognition of the relevant attributes (e.g. competence) in the compatible blocks, and it would not evoke competing responses in the incompatible blocks (e.g. only possible response for the distracter from superordinate or general category would be "No Go", since the distracter was not associated with target categories and attributes). By this way, findings of the dissertation would be comparable with the findings of Wade and Brewer (2006) who failed to provide support for the implicit stereotype dimensions in a direct association measure, i.e. LDT.

Following Wade and Brewer (2006), homemakers and businesswomen were presented as the target groups to show that even for these groups, stereotype contents would occur at implicit level. By this way, it was aimed to discard the argument that differing target groups used in different implicit measures could be responsible for the inconsistent findings. In order to uncover the comparison processes, however, the distracters of the target categories were manipulated in four studies. Furthermore, deferring impacts of the context manipulation on specific stereotype contents, i.e. businesswomen's competence and homemakers' warmth, were compared to investigate whether social reality concerns has an impact on implicit stereotype contents. By this way, the three research questions of the present dissertation were examined, namely:

> Q1: Do stereotype contents occur in individuals' categorization performance (i.e. GNAT performance) when the categorization context does not provide any comparison clue for the two target groups?

Q2: Do stereotype contents occur in individuals' categorization performance when two target groups are presented in a comparative context in which a group is presented as the target and the other group is presented as a distracter?

Q3: Do stereotype contents occur in individuals' categorization performance when competence and warmth dimension are presented in a comparative context in which a dimension is presented as the attribute category and the other dimension is presented as a distracter?

In all studies, participants were required to rate targets groups on the competence and warmth dimensions. By this way, the correlations between explicit and implicit stereotype contents were examined. Furthermore, participants were required to complete "Ambivalent Sexism Inventory" (ASI) and "Gender Specific System Justification Scale" in order to examine the relation between system justification motivation and implicit stereotype contents.

4.2 From Comparison to Compensation: Motivational Underpinnings of Mixed Stereotypes

In the second part of the present PhD dissertation, the focus shifts from cognitive processes to motivational tendencies. In this section, the comparison process was related to individuals' compensation tendencies. By doing so, the relation between individuals' compensation tendencies and system justification motivations were investigated.

In order to separate differing effects of comparison and compensation, the order of presentation was manipulated. By this way, the compensatory relation between the competence and the warmth ratings toward high and low status groups were examined. The target groups were businesswomen and homemakers. As in the first

part of the dissertation, participants were required to complete “Ambivalent Sexism Inventory” in order to examine the relation between system justification motivation and implicit stereotype contents.

To examine the research questions related to the second part of the dissertation, three analysis strategies were used as followed:

> Q4: Do individuals compare the groups presented to them in terms of competence and/or warmth?
>
> Strategy 1: The effect of the order of presentation was analyzed in an ANOVA model. Comparing the stereotypic ratings toward the target group presented first and second, it investigated that on which dimension participants compare businesswomen and homemakers
>
> Q5: Do individuals compensate low-groups’ unprivileged position on competence dimension by exaggerating their warmth ratings?
>
> Strategy 2: The correlations between the stereotype contents of businesswomen and homemakers were examined in a regression model.
>
> Q6: Do the system justifying ideologies take a role in compensatory relation between stereotypic evaluations of high-status and low-status groups?
>
> Strategy 3: In a regression model, moderator role of the system justification motivation on the compensatory relation between competence and warmth ratings toward businesswomen and homemakers was examined.

CHAPTER 5

STUDY 1

The aim of the first study is to replicate the findings of Wade and Brewer (2006), indicating that competence and warmth does not occur in individuals' implicit task performance for businesswomen and homemakers. By this way, the first question of the present dissertation was examined, namely

> Q1: Do stereotype contents occur in individuals' categorization performance (i.e. GNAT performance) when the categorization context does not provide any comparison clue for the two target groups?

5.1 Method

5.1.1 Participants

Seventy one female students were recruited from different departments of METU for two points in their corresponding classes. Participant age ranged between 18 and 48 (M=20.98, SD=3.49). Education level of participants' parents was quite high. Most of the fathers were graduated from university (41.4%), and they were followed by high school graduates (28.6%). The percentage of primary school graduates was relatively low (14.3%). Similarly, most of the mothers were university graduates (35.7%), or high school graduates (24.3%). However, percentage of primary school graduates was relatively high (25.7%). The percentage of homemaker mothers was quite high (48.6%).

5.1.2 Instruments

GNAT: A standard GNAT session consists of four learning blocks, four practice blocks and four critical blocks. The learning blocks are presented at the beginning of the session to allow participants to learn stimulus materials used in the GNAT sessions. Completing the learning blocks, participants are provided an opportunity to get familiar with the task in the practice block. The practice blocks were always presented before the critical blocks.

The stimulus materials of the GNAT sessions were selected in a preliminary study. In the preliminary study, ten participants were asked to rate 30 pictures on a 7 point Likert Scale ranging between 1 (resembles a homemaker) and 7 (resembles a businesswoman) with a midpoint labeled as "just a woman" (see Appendix 1 for the stimulus pictures). One sample t test was conducted to investigate whether participants' ratings significantly differ from the midpoint of the presented scale. Findings showed that they correctly categorized seven of ten homemaker pictures (*t(9)s< -2.86, p<.05*); six of ten woman pictures (*t(9)s btw. -1.81 and 1.96, p>.05*); and nine of ten businesswoman pictures (*t(9)s>2.33, p<.05*). Considering participants' written opinions, it was observed that some participants evaluated few homemaker pictures as daily servant. To resolve this ambiguity, the definition of businesswoman changed to include only the white-collar employees. The problem with the businesswoman and woman pictures, however, was their similarity. To overcome this problem, the incorrectly categorized businesswoman and woman pictures were slightly modified. The picture stimuli in Study 1 are presented in Appendix 1.

The stimuli in the attribute categories consisted of ten traits for each attribute categories of positive competence (i.e. Competent), negative competence traits (i.e. Incompetent), positive warmth (i.e. Warm), and negative warmth (i.e. Cold). All these traits were selected from several SCM studies using explicit and implicit measurements (Aktan & Güvenç, 2008; Carlsson & Björklund, 2010; Fiske et al., 2002; Wade & Brewer, 2006). The trait stimuli in Study 1 are seen in Table 1.

Table 1. Traits in the attribute categories of GNAT sessions

	Stereotype Contents	
	Competence	**Warmth**
Positive	ambitious, determined, hardworking (wise), intelligent, competent, skillful (successful), sufficient (confident), expert, useful (efficient), and qualified	caring, humane, faithful, altruistic, warm, sensitive (loyal), close, intimate, honest, and good humored
Negative	insufficient, unwise, lazy, unqualified, inexperienced, clumsy, uneducated, useless, cumbersome, and fool	repulsive, difficult, aggressive, offensive, selfish, rude, impolite, stubborn, mean and bad-tempered

Note: Traits in the parenthesis show the new traits used in Study 2 – 4 by removing the trait before parenthesis.

In the GNAT sessions, participants were required to categorize the pictures related to the target groups and the traits related to the attribute categories. All stimuli were presented on a 1024 X 768 pixels computer monitor. Participants saw the labels of target groups at the upper left side of the screen and attribute labels at the upper right side. The pictures and traits were presented in the middle of the screen, and participants were required to decide whether the stimulus at the middle of the screen belongs to one of the categories seen at the upper panel of the screen. Participants were asked to hit spacebar as fast as possible, when the target stimulus and the presented category labels were consistent; but to wait when the target stimulus and the presented category labels were inconsistent. The distracters of the target groups (i.e. homemakers or businesswomen) were the stimuli in the superordinate category (i.e. women), while the distracters of attribute category were the opposite-valence

traits (i.e. the distracters were the negative competence related traits when the target attribute category label was “competent” and the negative warmth related traits when the target attribute was “warm”, and vice versa). Contextual manipulations in GNAT studies were presented in Table 2.

The learning blocks were consisted of 20 trials for each block (ten target stimuli and ten distracter stimuli). In the learning trials, only one category label was presented to the participants. By this way, participants had an opportunity to learn the stimuli in each category. Completing the learning blocks, participants started to the first practice block. In the practice blocks, participants saw two category labels on the upper panel of the screen and they were required decide whether the stimulus presented in the middle of the screen belongs to one of these two categories.

The practice blocks consisted of 16 trials, four stimuli for the target group, four stimuli for the distracter of the target group, four stimuli for the target attribute, and four stimuli for the distracter of the target attribute. Completing the practice trials, participants started the first critical block. The critical blocks were identical to the practice blocks, except for the number of the trials (fifteen stimuli for the target group, fifteen stimuli for the distracter of the target group, fifteen stimuli for the target attribute, and fifteen stimuli for the distracter of the target attribute).

After all trials, participants received a feedback showing that they categorized the stimuli correctly (either pressing spacebar when a target stimulus is presented or waiting when a distracter is presented) or incorrectly (either pressing spacebar when a distracter is presented or waiting when a target stimulus is presented). Correct categorizations were followed by a green circle, while wrong categorizations were chased by a red X. Following Nosek and Banaji (2001), all stimuli were presented in a response window. Since, participation’s reaction times were recorded; the response windows for the target stimuli were wider than the distracters (Nosek & Banaji, 2001). Thus, the response window for the target and distracter stimuli were set as followed: the target stimuli were presented for 1200 ms, the distracters were presented for 600 ms, and feedback were presented for 500 ms.

Table 2. Summary of contextual variations and GNAT designs for study 1 – 4

	Target Group	Distracter	Target Attribute	Distracter
Study 1 GNAT 1 Competence	Businesswoman	Woman	Competence (+)	Competence (-)
	Homemaker	Woman	Competence (+)	Competence (-)
	Businesswoman	Woman	Competence (-)	Competence (+)
	Homemaker	Woman	Competence (-)	Competence (+)
GNAT 2 Warmth	Businesswoman	Woman	Warmth (+)	Warmth (-)
	Homemaker	Woman	Warmth (+)	Warmth (-)
	Businesswoman	Woman	Warmth (-)	Warmth (+)
	Homemaker	Woman	Warmth (-)	Warmth (+)
Study 2 GNAT 1 Single Context	Businesswoman	Homemaker	Competence (+)	Warmth (+)
	Homemaker	Businesswoman	Competence (+)	Warmth (+)
	Businesswoman	Homemaker	Warmth (+)	Competence (+)
	Homemaker	Businesswoman	Warmth (+)	Competence (+)
Study 3 GNAT 1 Single Context	Businesswoman	Homemaker	Competence (+)	Warmth (+)
	Homemaker	Businesswoman	Competence (+)	Warmth (+)
	Businesswoman	Homemaker	Warmth (+)	Competence (+)
	Homemaker	Businesswoman	Warmth (+)	Competence (+)
GNAT 2 Generic Context	Businesswoman	Generic	Competence (+)	Warmth (+)
	Homemaker	Generic	Competence (+)	Warmth (+)
	Businesswoman	Generic	Warmth (+)	Competence (+)
	Homemaker	Generic	Warmth (+)	Competence (+)
Study 4 GNAT 1 Competence	Businesswoman	Homemaker	Competence (+)	Competence (-)
	Homemaker	Businesswoman	Competence (+)	Competence (-)
	Businesswoman	Homemaker	Competence (-)	Competence (+)
	Homemaker	Businesswoman	Competence (-)	Competence (+)
GNAT 2 Warmth	Businesswoman	Homemaker	Warmth (+)	Warmth (-)
	Homemaker	Businesswoman	Warmth (+)	Warmth (-)
	Businesswoman	Homemaker	Warmth (-)	Warmth (+)
	Homemaker	Businesswoman	Warmth (-)	Warmth (+)

Stereotype Content Ratings: Participants were required to report their stereotypic beliefs about homemakers and businesswomen on a 6 point Likert scale (1= certainly not a characteristic of homemakers/businesswomen, 5= certainly a characteristic of homemakers/businesswomen). The competence and warmth related traits were chosen from GNAT stimulus list, but only the positive traits were used in the final scale. The remaining items in stereotype content scales are presented in Appendix 2. The reliability of competence and warmth subscales were high, for homemaker α= .81 and α= .95, respectively; for businesswoman α= .88 and α= .90, respectively.

Ambivalent Sexism Inventory (ASI): Participants' sexist beliefs were assessed by using Glick and Fiske's ASI (1996), adapted by Sakallı-Uğurlu (2002). ASI consists of two subscales, namely Benevolent and Hostile Sexism, and several studies provided significant support for the scale's validity and reliability (Glick et al., 2000). In the present study, participants reported their agreement with sexist beliefs on a 6 point Likert scale (1= certainly I do not agree, 5= certainly I agree). Reliability of benevolent and hostile sexism subscales were high, α=.87 and α=.89, respectively.

Gender Specific System Justification Scale: Participants' gender related system justification motivation was measured by using eight opinion statements developed by Kay and Jost (2003). The Turkish version of the scale is presented in Appendix 3. Participants were required to respond these statements on a 6 point Likert scale (1= certainly I do not agree, 5= certainly I agree). The reliability of the scale was acceptable, α=.70.

5.1.3 Procedure

The present study and following GNAT studies were approved by METU Human Research Ethics Committee (application numbers are 2010-SOS-056 and 2010-SOS-33). All GNAT studies were conducted in Psychology Experiment and Observation Laboratory in METU. Participation to the GNAT studies was rewarded 2 points in their corresponding classes. Before the GNAT sessions, participants read and signed

the informed consent. Participants were taken to the GNAT sessions separately, and after completing the GNAT sessions, they were asked to fulfill the presented scales. After the rating sections, participants were debriefed and thanked.

Since a single GNAT session took approximately 8 minutes, participants were required to complete only one of the competence or the warmth GNATs. Thus, results were analyzed in a 2 (Target Attribute: Competence vs. Warmth) X 2 (Target Group: Businesswomen vs. Homemakers) X 2 (Valence: Positive vs. Negative) ANOVA model with repeated measures on the last two factors.

Differing from Nosek and Banaji (2001), all analyses were conducted on participants' performance in individual blocks, rather than the difference scores of positive and negative blocks. Since, definition of mixed stereotypes suggests to compare competence and warmth of HC/LW and LC/HW groups, each block was analyzed in an ANOVA design. By this way, findings of the present study was also compared to Wade and Brewer (2006) and White and Gardner (2009), who failed to observe implicit mixed stereotypes at the negative dimensions. However, additional analyses were conducted on difference scores between compatible and incompatible blocks. By this way, participants' implicit preferences were examined.

5.2 Results

Both participants RTs and true/false proportions were examined to uncover the cognitive underpinnings of stereotype contents. To compare participants RTs, z-score transformation was conducted and these scores was log transformed to normalize the distribution. To investigate participants' true/false proportions, d-prime (sensitivity) scores were calculated (Nosek & Banaji, 2001). Finally, participants' implicit preference scores were calculated, such that positive values for sensitivity scores and negative values for RTs would reflect a preference on competence over warmth (e.g. difference between RTs in businesswoman-competence and businesswoman-warmth.

5.2.1 Stereotype Contents in Participants' RTs

A mixed ANOVA with repeated factors of target groups (businesswoman and homemaker) and the valence of target attribute (positive vs. negative), and a between subject factor of target attribute (competence or warmth) was conducted on participants' RTs. Means and standard deviations for participants' RTs in each block were presented in Table 3.

Findings revealed that the main effect of target group and the interaction of target groups and target attribute was significant, $F(1,63)= 9.84$, $p<.01$,$\eta^2 =.135$; $F(1,63)= 4.26$, $p<.05$, $\eta^2 =.063$, respectively. Simple comparisons showed that homemaker (M=590.33, SD=57.82) were recognized faster than businesswoman (M=611.76, SD=56.09), and regardless of the valence, participants were faster when homemaker and warmth were presented as target pairs (M=582.93, SD=49.31) than when businesswoman and warmth were presented (M=618.78, SD=63.68), $t(33)=-3.51$, $p<.001$. More importantly, these main and interaction effects were qualified with a marginally significant three way interaction of target groups, target attribute and the valence of target attribute, $F(1,63)=3.78$, $p=.056$, $\eta^2 =.057$. As seen in Figure 1, simple comparisons revealed that participants' RTs for homemaker were faster in both positive and negative warmth conditions (M=583.93, SD=59.63; M=581.93, SD=581.93, SD=49.73, respectively) than for businesswoman (M=621.98, SD=66.78; M=615.98, SD=81.23), $t(33)= -3.36$, $p<.001$; $t(33)= -2.69$, $p<.01$, respectively. Simply, significant differences in warmth condition reflected target group by target attribute interaction. However, in the competence condition, participants RTs significantly differed only when the valence of the target attributes was negative, showing that homemaker was more strongly associated with negative competence than businesswoman, M=589.32, SD=71.31; M=607.35, SD=55.19; respectively, $t(30)=-1.75$, $p=.05$.

Table 3. Means and standard deviations of participants' RTs and sensitivity scores in Study 1.

	Reaction Times						Sensitivity Scores					
	Positive			Negative			Positive			Negative		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Homemaker												
Competence	607.58	66.57	31	589.32	71.31	31	3.23	.57	33	3.31	.52	33
Warmth	583.93	59.63	34	581.93	49.73	34	3.39	.38	37	3.31	.42	37
Total	595.21	63.66	65	585.46	60.60	65	3.31	.49	70	3.31	.47	70
Businesswoman												
Competence	600.34	48.03	31	607.35	55.19	31	3.42	.40	33	3.09	.67	33
Warmth	621.98	66.78	34	615.98	81.23	34	3.26	.49	37	3.10	.66	37
Total	611.66	59.16	65	611.86	69.63	65	3.34	.45	70	3.10	.66	70

One-sample t tests were conducted on difference scores to investigate whether implicit preferences were shaped by stereotype contents. Result showed that difference between RTs in homemaker-competent and homemakers-incompetent blocks significantly differed from zero ($t(30)=2.65$, $p<.05$), showing that participants disfavored homemakers on competence dimension. No other preference scores significantly differed from zero.

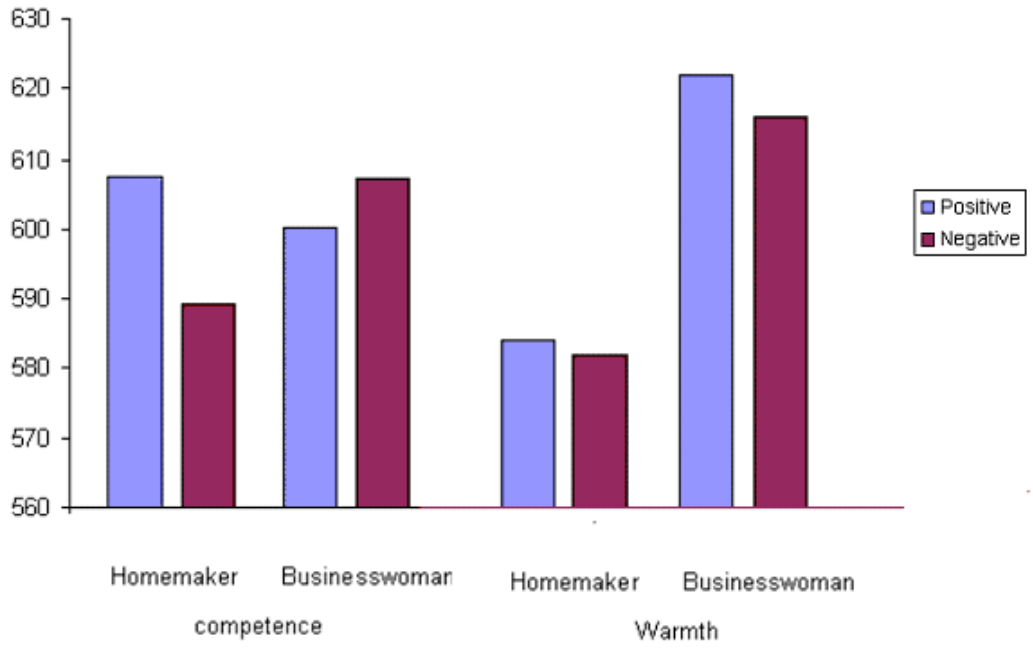

Figure 1. Means of participants' RTs in Study 1

5.2.2 Stereotype Contents in Participants' Sensitivity Scores

Participants d scores were analyzed in a mixed ANOVA with repeated factors of target groups (businesswoman and homemaker) and the valence of target attribute (positive vs. negative), and a between subject factor of target attribute (competence

or warmth). Means and standard deviations for participants' sensitivity scores in each block are presented in Table 3

The ANOVA revealed that the main effect of the valence was significant, showing that participants were more sensitive for positive attributes (M=2.07, SD=.33) than negative ones (M=1.95, SD=.35), $F(1,68)=5.15$, $p<.05$, $\eta^2=.07$. The interaction of target group and valence was also significant, $F(1,68)=9.81$, $p<.01$, $\eta^2=.13$, indicating that the association between homemakers and negative attributes (M=3.31, SD=.47) was stronger than the association between businesswoman and negative attributes (M=3.09, SD=.66; $t(69)=2.80$, $p<.01$). Similarly, businesswoman was associated with positive attributes (M=3.34, SD=.45) more than negative ones, $t(69)=3.05$, $p<.01$. However, this interaction was qualified with an interaction of target group, the valence of the attribute and target attribute, $F(1,68)=4.30$, $p<.05$, $\eta^2=.06$. As seen in Figure 2, simple comparisons showed that businesswoman was associated with positive competence more than negative competence, M=3.42, SD=.39 ; M=3.09, SD=.69 , respectively, $t(32)= 2.69$, $p<.01$, and homemaker was associated with negative warmth more strongly than businesswoman, M=3.31, SD=.42 ; M=3.10, SD=.65, respectively, $t(36)= 2.07$, $p<.05$.

Four one-sample t tests were conducted on participants' preference scores for homemakers and businesswomen. Result showed that the difference between the sensitivity scores in businesswoman-competent and businesswoman-incompetent blocks significantly differed from zero ($t(30)=2.54$, $p<.05$), replicating results of the ANOVA, such that participants preferred businesswomen on competence dimension. No other preference scores significantly differed from zero.

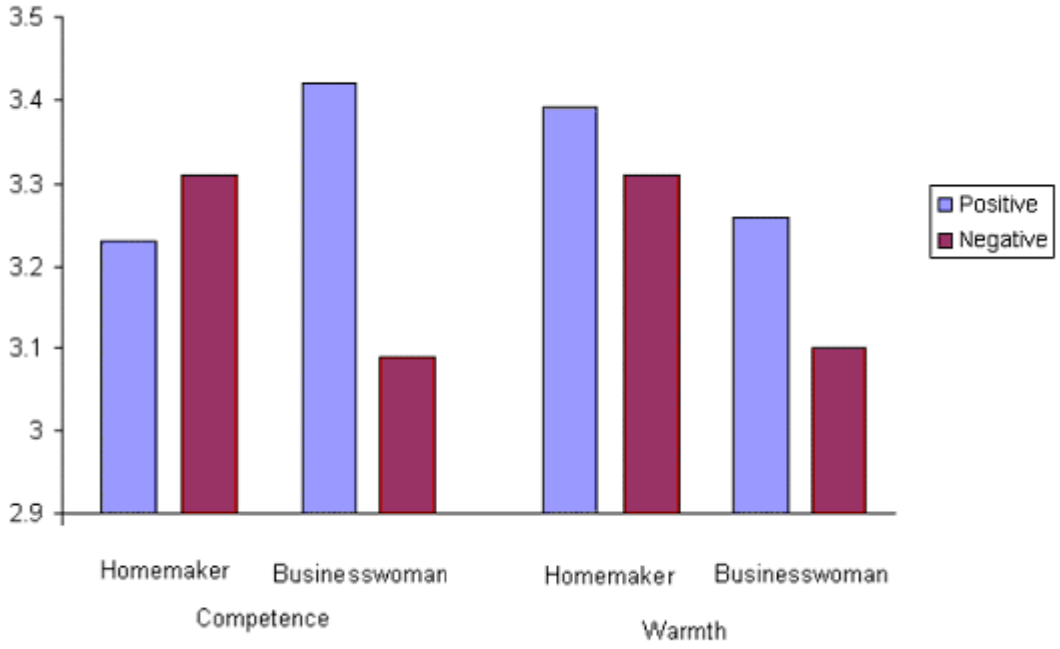

Figure 2. Means of participants' sensitivity scores in Study 1

5.2.3 Stereotype Contents in Participants' Trait Ratings

Participants' trait ratings were analyzed in an ANOVA with repeated factors of target groups (businesswoman and homemaker) and stereotype contents (competence and warmth). Means and standard deviations for participants' ratings are presented in Table 4.

ANOVA findings revealed a significant main effect of stereotype content, showing that participants competence ratings (M=4.59, SD=.62) were higher than warmth ratings (M=4.02, SD=.83), $F(1,68)=52.77$, $p<.001$, $\eta^2=.44$. The interaction of target groups and stereotype contents were also significant, $F(1.68)=222.26$, $p<.001$, $\eta^2=.77$, indicating that homemakers were rated as warmer than competent, M=4.59, SD=.99; M=4.05, SD=.80, respectively, $t(68)=-5.12$, $p<.001$, while businesswomen were seen more competent than warm, M=5.12, SD=.72; M=3.44, SD=.88,

respectively, t(68)=15.19, p<.001. Homemakers were also rated as warmer but less competent than businesswomen, t(68)=-10.71, p<.001; t(68)=10.18, p<.001, respectively.

Table 4. Means and standard deviations of participants' trait ratings in Study 1.

	Mean	SD	N
Homemaker			
Competence	4.05	.80	69
Warmth	4.59	1.00	69
Businesswoman			
Competence	5.12	.72	69
Warmth	3.44	.88	69

5.2.4 Relations among Participants' Implicit and Explicit Stereotype Contents, and Their Beliefs Regarding to Sexism

Correlation coefficients for the implicit and explicit measures in Study 1 were presented in Table 5. In general, correlations between implicit and explicit measures were not significant, except the correlations between sensitivity scores for businesswoman-competence block and ratings of competence (r(31)= .42, p<.05) and warmth (r(31)= .37, p<.05) for homemakers and ratings of warmth (r(31)= .38, p<.05) for businesswomen. The correlation between sensitivity scores for businesswoman-incompetence and rating of warmth for homemakers (r(31)= .62, p<.01) and for businesswomen (r(31)= .43, p<.05) were also significant. The only expected relationships between implicit and explicit measures were observed in the correlation between RTs for homemaker-competent block and ratings of

homemakers' competence ($r(31)= -.39$, $p<.05$). In the warmth condition, however, no implicit and explicit measures were correlated.

In general, participants RTs and d prime scores were not correlated with each other, except that RTs for businesswomen-competence were significantly correlated with sensitivity scores of businesswoman-competence ($r(31)= -.36$, $p<.05$) and homemaker-incompetence ($r(31)= .39$, $p<.05$) blocks. In general, participants' trait ratings were positively correlated with each other. However, no specific pattern emerged in participants' trait ratings and sexist beliefs.

Table 5. Correlations among participants' sensitivity scores, RTs and ratings in Study 1

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
dprime	**1.HmPoz**	—	.52**	.22	.13	-.28	-.23	.15	.10	.11	-.12	.18	.06	-.23	.17	.12
	2.HmNeg	.73**	—	.32	.52**	-.28	-.35	-.39*	-.28	.10	.13	.20	.27	-.11	-.01	-.12
	3.BwPoz	.20	.32	—	.31	-.20	-.07	-.36*	-.16	.30	.38*	.42*	.37*	.12	-.03	.20
	4.BwNeg	.21	.51**	.44*	—	.03	-.14	-.19	-.27	.24	.43*	.34	.62**	.08	.03	-.12
RTs	**5.HmPoz**	-.38*	-.29	.08	-.02	—	.83**	.47**	.58**	-.26	-.19	-.39*	-.08	.19	.17	.03
	6.HmNeg	.02	-.22	-.05	-.05	.65**	—	.60**	.65**	-.18	-.11	-.24	-.040	.25	.19	.23
	7.BwPoz	-.01	-.17	-.13	-.25	.48**	.54**	—	.61**	-.30	-.11	-.25	-.32	-.09	.24	-.03
	8.BwNeg	.09	-.03	-.34*	-.22	.10	.44**	.51**	—	-.15	-.26	-.17	-.13	.16	.29	-.03
Ratings	**9.HmCmp**	.12	.05	-.16	-.19	-.03	-.08	-.03	-.22	—	.23	.28	.45*	.11	-.29	-.05
	10.HmWarm	-.10	.07	.17	.09	.11	-.17	-.16	-.24	.48**	—	.48**	.51**	-.04	-.31	-.02
	11.BwComp	.31	.23	.06	-.13	-.04	-.14	.09	-.02	.32	.21	—	.61**	.28	.14	.26
	12.BwWarm	-.01	-.07	-.09	-.17	.21	.08	.07	-.10	.64**	.62**	.46**	—	.12	-.01	0.22
	13.GSJT	.00	.03	-.15	-.10	.02	-.13	-.02	-.25	.40*	.16	.18	.27	—	.25	.24
	14.HS	-.21	-.30	-.21	-.08	-.03	-.21	-.02	-.29	.20	.11	.20	.37*	.46**	—	.53**
	15.BS	-.33	-.31	-.06	-.33	-.02	-.16	.07	-.13	.40*	.33	.17	.32	.43*	.37*	—

* p<.05, ** p<.01, *** p<.001

HmPoz: Homemaker-Positive; **HmNeg:** Homemaker-Negative; **BwPoz:** Businesswoman-Positive; **BwNeg:** Businesswoman-Negative blocks. For Ratings, **HmComp:** Homemakers' competence; **HmWarm:** Homemakers' warmth; **BwComp:** Businesswomen's competence; **BwWarm:** Businesswomen's warmth

Note: The upper diagonal of the table shows the correlations in the competence condition

5.3 Discussion

The aim of the first study was to investigate the implicit stereotype contents in a non-comparative measurement context. It was proposed that distracters in non-comparative context would not produce interfering response tendencies for target categories. By this way, Superordinate Category GNAT was expected to provide a direct association measure (Schneider, 2004), which supposedly assess activation of stereotypes (Brauer et al., 2000). In this sense, findings of the first study was expected to replicate Wade and Brewer's (2006) LDT findings, showing that implicit mixed stereotypes toward homemakers and businesswomen does not emerge in activation level.

The findings of the first study was quite complex, and did not provide a clear support for implicit stereotype contents. First of all, it seems that participants RTs were not shaped by stereotype contents, such that participants did not favor homemakers on warmth, and businesswomen on competence. However, the interaction of target groups and target attribute showed that regardless of their valence, warmth related traits were rapidly recognized when they were presented with homemaker, while presentation of businesswoman resulted in faster recognition of competence related traits. The interaction of target group, target attribute and valence qualified this tendency such that participants disfavored homemakers on competence. Implicit preference scores supported this finding, showing that participants associated homemakers with incompetence.

Participants' sensitivity scores depicted a quite different pattern, showing that participants implicit stereotypes mainly shaped by the valence of the attribute category. The interaction of target category and valence indicated that participants favored businesswomen on both competence and warmth dimensions. This interaction was qualified with target attributes, showing that businesswomen were favored on competence, and homemakers were disfavored on warmth dimension. Implicit preference scores also supported preference of businesswomen on the competence dimension.

Participants' trait ratings provided direct support for SCM, showing that homemakers were seen as warm but not as competent as businesswomen and businesswomen were rated as competent but not as warm as homemakers. The correlation among target groups' competence and warmth ratings reflected the halo effect. As in many studies using implicit and explicit measures together, the correlation between participants' GNAT performance and their trait ratings were either weak or non-significant (Devine & Sharp, 2009; Hofmann et al., 2005).

A possible source of the non-significant correlation could be the dissociation between automatic and controlled processes or between extrapersonal and personal beliefs (Devine, 1989; Fazio & Olson, 2003). Following Brauer et al. (2000), one would expect that implicit measures of non-goal dependent automatic activation of stereotypes would not be correlated with goal dependent explicit ratings. However, it should be noted that stereotype content scales in the present study were not indirect measures of prejudice, since, there is no subtle form SCM scales. For that reason, participants might hide their prejudiced attitudes, especially their negative attitudes toward homemakers, on explicit ratings.

Participants' RTs and d prime scores were not significantly correlated. Differing computational algorithms of RTs and sensitivity scores might be responsible for the non-significant correlation. Given that RTs were calculated on the speed of participants' hits, it would be expected that RTs would be more sensitive to the facilitative impact of supraliminal presentation of target groups. However, sensitivity scores would be more sensible for interference of the distracter in the incompatible blocks, since calculation of d prime was compromised of both hit and false alarm rates. In this respect, one would speculate that these two scores might correspond to different processes, especially in non-comparative GNAT.

In general, findings of the first study were in line with Wade and Brewer (2006) indicating that stereotype contents does not occur in direct association measures and female university students favor businesswomen over homemakers. In a related vein, participants' tendency not to associate businesswoman and negative warmth provide

partial support for White and Gardner (2009), indicating that HC/LW groups are associated with positive competence but not with negative warmth. However, this pattern was not supported for LC/HW groups (i.e. homemaker in this study).

The interaction of target group by target attribute depicted an interesting pattern on participants' RTs. Regardless of valence, competence and warmth related traits were recognized faster when they were presented with businesswoman and homemaker, respectively. Two possible explanations could be suggested for this pattern. On the one hand, it could be suggested that the target groups might be associated with corresponding attributes at the activation level. On the other hand, distracters from opposite-valence attribute category might provide a comparative context for the target attribute category. Even though the first suggestion is in line with arguments regarding to semantic associations (De Houwer et al., 2009); it should be noted that the traits in this study were clearly evaluative. The second suggestion underlines a limitation of GNAT, i.e. this task originally developed for measuring implicit preferences rather than semantic association. For that reason, choosing distracters of target attributes from a general category (i.e. objects or traits those are unrelated to target attributes) would dramatically impair GNAT effect (Nosek & Banaji, 2001). To avoid this possibility, opposite-valence category was preferred in Study 4.

In sum, findings of the first study indicate that in non-comparative context, competence and warmth dimensions does not emerge in individuals' implicit associations. Rather, the valence of the stereotype contents seems to shape implicit preferences (Wade & Brewer, 2006). However, the first study had many limitations. First of all, participants reported difficulties in differentiating some pictures of businesswoman and woman. Furthermore, preliminary analysis and debriefings of participants indicated that participants related the superordinate category (i.e. woman) with warmth stereotype. Therefore, the superordinate category might bias the GNATs by providing a comparative context for the businesswoman category, but not for the homemaker category. Finally, preliminary analysis conducted separately on participants' reactions times in each trial indicated that some of the target traits did not differentiate businesswoman from homemaker, which might reduce the effect

size of the target attributes. To overcome these difficulties, these traits were replaced in following GNAT studies, as shown in Table 1. Additionally, general category, instead of superordinate category, was used in Study 3.

CHAPTER 6

STUDY 2

The aim of the second study was to investigate implicit stereotype contents in a comparative context. By this way, it was expected that findings of the present study would replicate IAT findings in Carlsson and Björklund (2010), indicating that implicit mixed stereotype contents occurs in cognitive interference measures. By this way, the second question of the present dissertation was examined, namely

> Q2: Do stereotype contents occur in individuals' categorization performance when two target groups are presented in a comparative context in which a group is presented as the target and the other group is presented as a distracter?

In the second study, both the target groups and target attributes were presented in a comparative context. Thus, target attributes were presented in a within subject design. In line with the findings of the first study, some pictures of businesswoman category were modified. Similarly, the competence and warmth related traits were reorganized. Trait and picture stimuli in Study 2 are presented in Table 1 and Appendix 2, respectively. Finally, implicit preference scores were calculated for target groups, such that positive values for sensitivity scores and negative values for RTs would reflect a preference on competence over warmth (e.g. difference between RTs in businesswoman-competence and businesswoman-warmth blocks).

6.1 Method

6.1.1 Participants

Fifty nine female students were recruited from different departments of METU. Two participants were discarded from the analysis because of their excessive errors. Remaining participants' ages ranged between 18 and 23 (*M*=19.33, *SD*=.85). Education level of participants' parents was quite high. Most fathers were university (45.6%), or high school graduates (24.60%). The percentage of primary school graduates was relatively low (12.30%). Similarly, most of the mothers were university graduates (50.88%), or high school graduates (19.30%). However, percentage of primary school graduates was relatively high (17.5%). The percentage of homemaker mothers was also quite high (35.10%).

6.1.2 Instruments and Procedure

All instruments and procedures were identical to Study 1, except for the distracters of the target group and target attribute in the GNAT sessions, and the response window in which target and distracter stimuli is presented. In study 2, the distracter of the target group (e.g. businesswomen) was the opposite group (e.g. homemakers) rather than the superordinate group (i.e. women). Similarly, the distracter of the target attribute (e.g. competence) was the opposite attribute (e.g. warmth) rather than the negative attribute (e.g. incompetence). Thus, the target groups and target attributes were presented in a comparative context. The design of the GNATs in Study 2 was presented in Table 2. Finally, the response window was set to 833 ms for the first two GNATs, and 666 ms for the last two GNATs (Nosek & Banaji, 2001). By this way, it is aimed to reduce participants' high hit rates.

6.2 Results

6.2.1 Stereotype Contents in Participants' RTs

An ANOVA with repeated factors of target groups (businesswomen and homemakers) and stereotype contents (competence and warmth) was conducted on participants' log-transformed RTs. Means and standard deviations for RTs in each block were presented in Table 6.

Results of ANOVA revealed a main effect of target attributes, showing that participants' categorization performance was faster in warmth related conditions (i.e. homemaker-warmth and businesswoman-warmth pairs), $F(1,56)=4.70$, $p<.001$, $\eta^2 =.068$. More importantly, an interaction of target groups and target attributes was significant, $F(1,56)=40.80$, $p<.001$, $\eta^2 =.421$. Simple comparisons revealed a clear-cut pattern of mixed stereotypes, showing that participants' RTs were faster in homemaker-warmth pair than in homemaker – competence and businesswoman – warmth pairs, $M=542.62$, $SD=39.20$, $M=566.70$, $SD=47.12$ and $M=560.70$, $SD=44.98$, respectively; $t(56)=5.71$, $p<.001$ and $t(56)=-1.97$, $p<.05$, respectively. As seen in Figure 3, participants' RTs were faster in businesswoman – competence pair than in businesswoman – warmth and homemaker – competence pairs, $M=546.31$, $SD=43.16$, $M=560.70$, $SD=44.98$ and $M=566.70$, $SD=47.12$, respectively; $t(56)=-3.83$, $p<.001$ and $t(56)=2.18$, $p<.05$, respectively. Thus, mixed stereotypes of homemakers and businesswoman occurred in participants response latencies.

Table 6. Means and standard deviations of participants' RTs, sensitivity scores and trait ratings in Study 2

	Reaction Times			Sensitivity Scores			Trait Ratings		
	Mean	**SD**	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**	**N**
Homemaker									
Competence	566.70	47.12	57	1.91	.86	57	3.58	.93	57
Warmth	542.62	39.20	57	2.7	.75	57	4.71	.97	57
Businesswoman									
Competence	546.31	43.16	57	2.58	.80	57	5.2	.63	57
Warmth	560.70	44.98	57	1.91	.88	57	3.34	.89	57

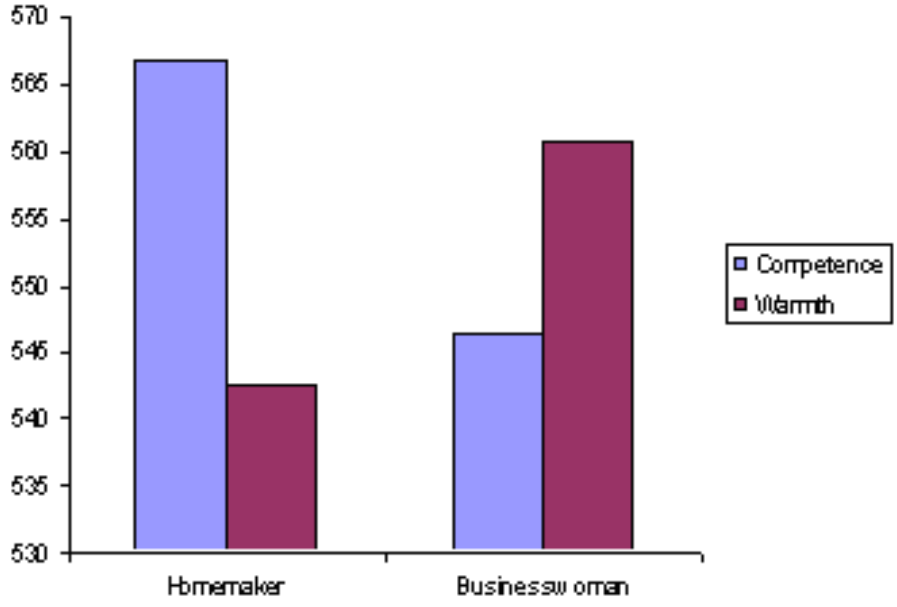

Figure 3. Means of participants' RTs in Study 2

One sample t-tests were conducted on implicit preference scores to investigate whether participants' RTs reflect a preference for businesswomen on competence and for homemakers on warmth. Results revealed that preference scores significantly differed from zero for both businesswoman and homemaker ($t(56)=-3.83$, $p<.001$ and $t(56)=5.71$, $p<.001$). Thus, preference scores reflected ANOVA findings, indicating that businesswomen were associated with competence, while homemakers were associated with warmth.

6.2.2 Stereotype Contents in Participants' Sensitivity Scores

To investigate participants' responses in GNAT sessions, participants' hit and false alarm rates were transformed to d scores. An ANOVA with repeated factors of target group (businesswoman and homemaker) and target attributes (competence and warmth) was conducted on participants' sensitivity scores. Means and standard deviations for sensitivity scores in each block were presented in Table 6.

Results of ANOVA showed that only the interaction of target group and target attribution was significant, $F(1,56)=88.17$, $p<.001$, $\eta^2=.61$. As seen in Figure 4, simple comparisons revealed that participants' showed higher sensitivity in the homemaker-warmth condition ($M=2.70$, $SD=.74$) than homemaker-competence ($M=1.91$, $SD=.86$) and businesswoman-warmth ($M=1.91$, $SD=.88$) conditions, $t(56)=-7.19$, $p<.001$; $t(56)=6.31$, $p<.001$, respectively. Furthermore, participants' sensitivity ratings were higher in businesswoman-competence condition ($M=2.58$, $SD=.80$) than businesswoman-warmth ($M=1.91$, $SD=.88$) and homemaker-competence ($M=1.91$, $SD=.86$) conditions, $t(56)=6.42$, $p<.001$ and $t(56)=-5.05$, $p<.001$, respectively. In sum, participants associated homemaker and warmth, and businesswoman and competence.

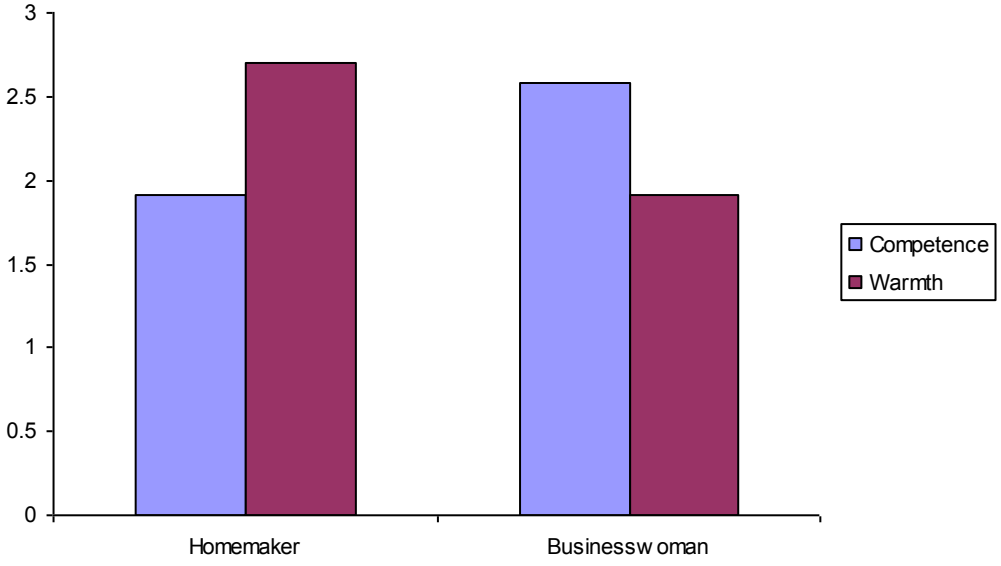

Figure 4. Means of participants' sensitivity scores in Study 2

One sample t-tests were conducted on implicit preference scores. Results revealed that preference scores significantly differed from zero for both businesswoman and homemaker ($t(56)=6.42$, $p<.001$ and $t(56)=-7.19$, $p<.001$). Thus, preference scores reflected ANOVA findings, indicating that businesswomen are associated with competence, while homemakers are associated with warmth.

6.2.3 Stereotype Contents in Participants' Trait Ratings

Participants' trait ratings were analyzed in an ANOVA with repeated factors of target groups (businesswomen and homemakers) and stereotype contents (competence and warmth). Findings revealed a significant main effect of stereotype contents, $F(1,56)=19.75$, $p<.001$, $\eta^2=.26$, showing that participants' ratings on competence dimension was higher than their ratings on warmth dimension, $M=4.39$, $SD=.57$ and $M=4.03$, $SD=.70$, respectively. More importantly, the interaction of target group and stereotype contents was significant, $F(1,56)=152.26$, $p<.001$, $\eta^2=.73$. As seen in Table 6, participants rated homemakers as warmer ($M=4.71$, $SD=.97$) than competent

(*M*=3.58, *SD*=.93), and their warmth ratings was higher for homemakers than businesswomen (*M*=3.34, *SD*=.89), *t*(56)=-7.51, *p*<.001, and *t*(56)=8.47, *p*<.001, respectively. Similarly, participants rated businesswomen as more competent (*M*=5.20, *SD*=.63) than warm, and their competence ratings was higher for businesswomen than homemakers, *t*(56)=13.24, *p*<.001 and *t*(56)=-11.12, *p*<.001, respectively.

6.2.4 Relations among Participants' Implicit and Explicit Stereotype Contents, and Their Beliefs Regarding to Sexism

Correlations between implicit and explicit measures in Study 2 were presented in Table 7. As a general pattern, the correlations between implicit and explicit measures were not significant. A few exceptions emerged for participants' RTs and sensitivity scores. The positive correlations among RTs and d prime scores seem to reflect participants' effort to perform categorization task better in the given conditions. A marginally significant negative correlation emerged between the sensitivity scores for the homemaker-warmth pair and gender specific system justification. This was an unexpected correlation, since traditional gender roles would be expected to increase system justification motivation (Jost & Kay 2005). A possible source of negative correlation could be egalitarian attitudes of career-oriented female students. For these participants, their heightened performance in homemaker-warmth block might make them aware of their sexist beliefs and consequently impair their beliefs in gender system.

Positive correlations among participants' RTs reflected a performance effect, such that participants RTs for compatible and incompatible block were highly correlated for both homemakers and businesswomen. All the correlations among participants' sensitivity scores were significant (*r*(57)s>.269, p<.05). Similarly, participants' sexist beliefs were also significantly and positively correlated with each other (*r*(57)s>.348, p<.01). Most interestingly, participants' competence and warmth ratings toward each target groups were either moderately correlated (i.e. homemakers' competence and warmth, *r*(57)=.28, p<.05) or they were not

significantly correlated (i.e. businesswomen's competence and warmth, $r(57)=.06$, $p>.05$. Considering the cross-target correlations, it was observed that participants' ratings reflected a compensatory pattern, such that the correlations were significant only for homemakers' warmth and businesswomen's competence ($r(57)=.52$, $p<.001$), and for homemakers' competence and businesswomen's warmth ($r(57)=.35$, $p<.01$).

Table 7. Correlations among participants' RTs, d prime scores, and ratings in Study 2

			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RTs	**1**	**HmComp**	—														
	2	**HmWarm**	.75***	—													
	3	**BwComp**	-.23	-.01	—												
	4	**BwWarm**	-.24	-.10	.82***	—											
d primes	**5**	**HmComp**	.15	.13	-.28*	-.21	—										
	6	**HmWarm**	.30*	.01	-.18	-.04	.47**	—									
	7	**BwComp**	-.09	-.18	.00	.14	.27*	.38**	—								
	8	**BwWarm**	-.19	-.17	.31*	.39**	.27*	.32*	.56**	—							
Ratings	**9**	**HmComp**	.04	-.07	.24	.24	-.16	-.01	.05	.06	—						
	10	**HmWarm**	.28*	.23	.04	.05	-.11	-.02	-.16	-.12	.28*	—					
	11	**BwComp**	-.02	.02	-.02	.01	.00	-.02	-.03	-.03	.04	.52**	—				
	12	**BwWarm**	.22	.17	.01	-.17	-.01	.00	-.15	-.05	.35**	.14	.06	—			
	13	**GSJ**	-.09	.02	.05	-.01	-.13	-.26*	-.11	-.19	-.00	.02	-.04	.15	—		
	14	**HS**	-.25	-.23	.06	.03	-.06	-.23	-.07	-.13	-.16	-.05	-.02	-.09	.42**	—	
	15	**BS**	.00	.08	.11	.08	-.13	-.17	-.10	-.05	.05	.20	.16	.08	.40**	.35**	—

* p<.05, ** p<.01, *** p<.001

HmPoz: Homemaker-Positive; **HmNeg:** Homemaker-Negative; **BwPoz:** Businesswoman-Positive; **BwNeg:** Businesswoman-Negative blocks. For Ratings, **HmComp:** Homemakers' competence; **HmWarm:** Homemakers' warmth; **BwComp:** Businesswomen's competence; **BwWarm:** Businesswomen's warmth

6.3 Discussion

The aim of the Study 2 was to investigate implicit stereotype contents in a comparative context. Single Category GNATs were used as a cognitive interference measure. Thus, it was expected to support findings of the studies using IAT (Carlsson & Björklund, 2010) and Modified Stroop Task (White & Gardner, 2009).

The findings of Study 2 were straightforward, showing that homemaker was associated with warmth, and businesswoman was associated with competence. Thus, mixed stereotypes emerged in both implicit and explicit measurements. In general, the correlations among RTs, d scores and trait ratings were not significant.

In their study on application hypothesis, Neuman and Seibt (2001) suggested that significant correlations between IAT scores and subtle prejudice ratings indicated that IAT measures implicit stereotype at application level. Even though, non-significant findings of present study are not compatible with their suggestion, it should be noted that stereotype ratings were collected with SCM scales in the present study. For that reason, the purpose of the scales was obvious for participants. Furthermore, in debriefing section, most of the participants reported that they correctly guessed the purpose of the GNATs and the scales. In this sense, self-presentational concerns could be a possible source of the non-significant correlations. Relatedly, the unexpected negative correlation between sensitivity scores in homemaker-warmth block and gender system justification scale implies that being aware of their tendency to associate homemakers with traditional low status roles impaired egalitarian female participants' belief in gender system. Although, it was not a purpose of the present study, the impact of egalitarian attitudes on the relation with system justification motivation and awareness of extrapersonal beliefs should be investigated in future studies.

In sum, the findings of the Study 2 indicate that implicit stereotype contents occur in the comparative context where target groups and target attributes were presented comparatively. Differing from Study 1, the manipulations in study 2 provided the

strongest context in which stereotype contents might differ from each other. Thus, present study provided significant support for SCM's fundamental dimensions and mixed stereotypes hypothesis at implicit level. In this sense, findings of Study 2 were in line with Carlsson and Björklund (2010) who observed implicit mixed stereotypes in IAT performance.

Comparing the findings of the first two studies, it could be argued that context might have a pivotal role in implicit stereotype contents. However, there were several limitations related with this comparison. First of all, some stimuli in the GNAT sessions were changed to increase the effect sizes of the factors in the Study 2. Secondly, differing from Study 1, the target attributes were presented in a within subject design in Study 2. Finally, the superordinate category in Study 1 (i.e. women) might be favoring businesswoman by providing a comparison in terms of (in)competence and warmth. In Study 3, the target attributes and contexts were presented in a within-subject design to investigate the effect of the context on participants' implicit stereotype contents. Furthermore, generic context, instead of the superordinate, was used as the non-comparative context for target groups.

CHAPTER 7

STUDY 3

The main purpose of Study 3 was to replicate the findings of first two studies in a comparable manner. By doing this, it was also aimed to extend the findings of first study to attribute-comparative context in General Category GNAT. That is, competence and warmth was presented as attribute categories in both Single Category and General Category GNATs. By using a within-subject design in Study 3, it was also possible to replicate the factor analysis approach in Brauer et al. (2000) to support their hypothesis regarding to activation-application distinction. By this way, first two questions of the present dissertation were examined, namely

> Q2: Do stereotype contents occur in individuals' categorization performance when two target groups are presented in a comparative context in which a group is presented as the target and the other group is presented as a distracter?
>
> Q3: Do stereotype contents occur in individuals' categorization performance when competence and warmth dimension are presented in a comparative context in which a dimension is presented as the attribute category and the other dimension is presented as a distracter?

7.1 Method

7.1.1 Participants

For the third GNAT study, fifty seven female students were recruited from different departments of METU. Five participants were discarded from the analysis because of their excessive numbers of errors. Remaining participants' ages ranged between 18 and 36 (*M*=21.34, *SD*=2.52). Education level of participants' parents was quite high. Most fathers were university (36.50%), or high school graduates (30.80%). The percentage of primary school graduates, however, was relatively low (17.30%). Similarly, most of the mothers were high school (32.70%), or university graduates (26.90%). However, percentage of primary school graduates was quite high (25.00%). The percentage of homemaker mothers was also quite high (55.80%).

7.1.2 Instruments and Procedure

All instruments and procedures were identical to Study 2, except for the distracters of the target group in the GNAT sessions and the study design. In Study 3, both single category and generic category was used as the distracters of the target groups in a within subject design. The study design was presented in Table 2.

Half of the participants completed Single Category GNATs at the beginning, and then Generic Category GNATs at the end of the study. For the generic category, objects semantically unrelated to target groups and target attributes were chosen from Dictionary of Word Frequency in Written Turkish (Göz, 2003). The pictures of these objects were used as the distracter stimuli in the generic category. Target and distracter stimuli for target groups were presented in Appendix 2.

7.2 Results

7.2.1 Stereotype Contents in Participants' RTs

An ANOVA with repeated factors of distracter context (single vs. generic), target groups (businesswoman and homemaker) and target attributes (competence and warmth) was conducted on participants' log transformed RTs. Means and standard deviations for participants' RTs in each block were presented in Table 8.

ANOVA findings revealed a significant interaction effect of target groups and target attributes ($F(1,51)=14.25$, $p<.001$, $\eta^2=.218$). As seen in Figure 5, simple comparisons showed that participants' RTs were faster for homemaker – warmth pair than homemaker – competence pair ($M=537.49$, $SD=26.73$, $M=549.85$, $SD=27.64$, respectively; $t(51)=3.18$, $p<.01$). Furthermore, participants associated businesswomen with competence more strongly than warmth ($M=543.17$, $SD=30.13$, $M=552.64$, $SD=29.41$, respectively; $t(51)=2.51$, $p<.05$). In a similar vein, homemakers were associated with warmth more strongly than businesswomen ($t(51)=-3.66$, $p<.001$). However, participants' RTs did not significantly differ in homemaker – competence businesswomen – competence pairings. In sum, regardless of the context, participants RTs reflected the ambivalent stereotypes toward homemakers and businesswomen. However, this interaction was qualified by a marginally significant three way interaction of context, target groups and target attributes, $F(1,51)=3.27$, $p=.076$, $\eta^2=.060$. Simple comparisons showed that the interaction of target groups and target attributes described above was seen only in the single context, but not in the generic context.

Table 8. Means and standard deviations of participants' RTs, d prime scores, and ratings in Study 3

	Reaction Times						Sensitivity Scores						Trait Ratings		
	Single Context			Generic Context			Single Context			Generic Context					
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Homemaker															
Competence	558.55	47.14	52	541.15	50.74	52	1.81	.79	52	2.47	.82	52	3.57	1.01	52
Warmth	542.03	41.76	52	532.95	40.48	52	2.44	.72	52	2.75	.79	52	4.80	.98	52
Businesswoman															
Competence	548.68	42.30	52	537.66	47.54	52	2.67	.75	52	2.61	.76	52	4.97	1.10	52
Warmth	562.89	50.14	52	542.38	52.34	52	1.68	.82	52	2.36	.82	52	3.36	.95	52

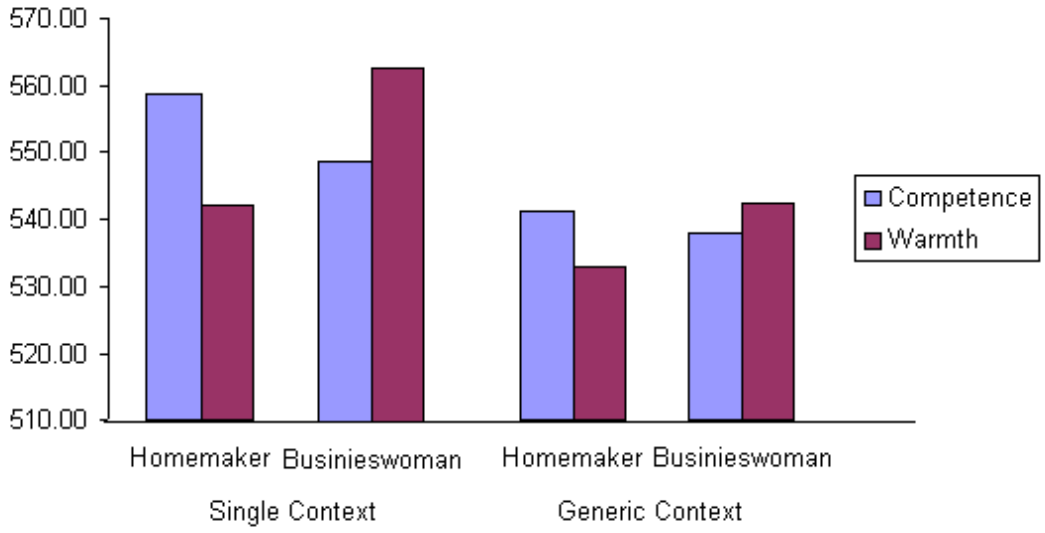

Figure 5. Means of participants' RTs in Study 3

One sample t tests were conducted on implicit preference scores (e.g. difference between RTs in homemaker-competent and homemaker-warmth blocks) gathered from both single and generic contexts. Results showed that preference scores significantly differed from zero for homemaker and businesswoman in single context ($t(51)=3.42$, $p<001$ and $t(51)=-2.73$, $p<01$), showing that participants favored homemakers on warmth ($M= 16.52$, $SD= 30.62$), and businesswomen on competence ($M= -14.21$, $SD= 32.63$). Preference scores did not significantly differ from zero in the generic context. Thus, preference scores showed a similar pattern observed in ANOVA findings.

7.2.2 Stereotype Contents in Participants' Sensitivity Scores

To investigate participants' sensitivity in GNAT sessions, their hit and false alarm rates were transformed to d scores. An ANOVA with repeated factors of distracter context (single vs. generic), target groups (businesswoman and homemaker) and target attributes (competence and warmth) was conducted on participants' sensitivity

scores. Means and standard deviations for participants' sensitivity scores in each block were presented in Table 8.

ANOVA findings revealed a main effect of distracter context, $F(1,51)=28.31$, $p<.001$, $\eta^2=.36$, showing that participants sensitivity scores were higher in the generic context ($M=2.54$, $SD=.67$) than the scores in single context ($M=2.15$, $SD=.62$). The main effect of context was qualified by interaction of distracter context and target attributes ($F(1,51)=4.26$, $p<.05$, $\eta^2=.08$), showing that participants sensitivity for competence was higher than for warmth in the single context, but not in the generic context. The interaction of target group and target attribute was also significant, $F(1,51)=105.91$, $p<.001$, $\eta^2=.67$. Simple comparisons revealed that participants showed higher sensitivity in the homemaker-warmth condition ($M=2.59$, $SD=.67$) than homemaker-competence ($M=2.14$, $SD=.61$) and businesswoman-warmth ($M=2.02$, $SD=.73$) conditions, $t(51)=-6.40$, $p<.001$; $t(51)=7.73$, $p<.001$, respectively. Furthermore, participants' sensitivity was higher in businesswoman-competence condition ($M=2.64$, $SD=.64$) than businesswoman-warmth and homemaker-competence conditions, $t(51)=8.49$, $p<.001$ and $t(51)=-7.75$, $p<.001$, respectively. In sum, participants associated homemakers with warmth, and businesswomen with competence.

Most importantly, the interaction of distracter context, target groups and target attributes was significant, $F(1,51)=32.63$, $p<.001$, $\eta^2=.39$. As seen in Figure 6, simple comparisons showed that participants' sensitivity scores simply reflected the interaction of target groups and target attributes in the single context. In the generic context, even though sensitivity scores indicated that participants associated homemakers with warmth and businesswomen with competence, their sensitivity for homemaker-competence pair did not significantly differ from businesswoman – competence pair. Similarly, participants' sensitivity scores for businesswoman – competence pair were not affected by the context, although their sensitivity for businesswoman-warmth, homemaker-competence, and homemaker-warmth pairs

were superior in the single context ($t(51)= 6.39$, $p<.001$, $t(51)=4.55$, $p<.001$, $t(51)=3.36$, $p<.001$, respectively).

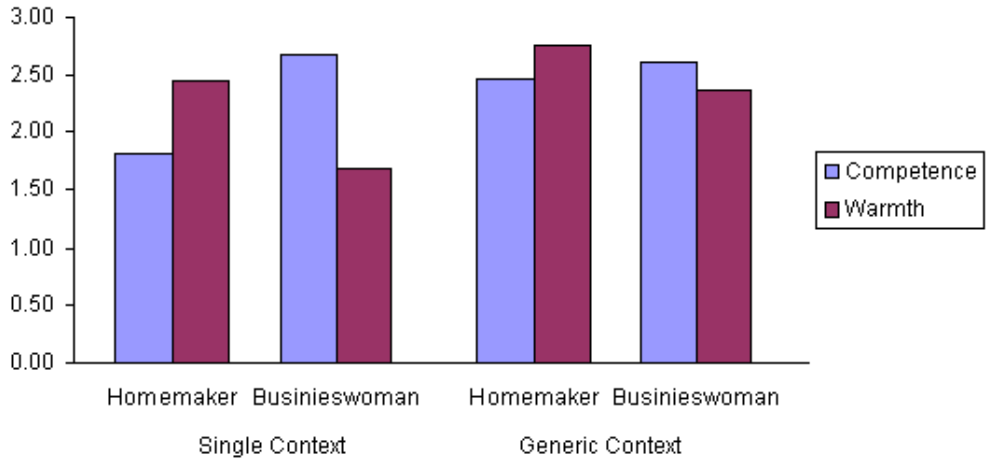

Figure 6. Means of participants' sensitivity scores in Study 3

One sample t tests supported the pattern observed in ANOVA, such that participants' implicit preference scores significantly differed from zero in both generic and single contexts for businesswomen's competence ($t(52)=2.56$, $p<.01$ and $t(52)=9.55$, $p<.001$, respectively) and for homemakers' warmth ($t(52)=-3.36$, $p<.001$ and $t(52)=-5.92$, $p<.001$, respectively). That is, regardless of the context, businesswomen were favored on competence, while homemakers were preferred on warmth.

7.2.3 Stereotype Contents in Participants' Trait Ratings

Participants' trait ratings were analyzed in an ANOVA with repeated factors of target groups (businesswoman and homemaker) and stereotype contents (competence and warmth). Only an interaction effect of target groups and stereotype contents was

significant. ($F(1,61)=105.91$, $p<.001$, $\eta^2=.67$). As seen in Table 8, simple comparisons showed that homemakers were rated as warmer ($M=4.80$, $SD=.98$) than competent ($M=3.57$, $SD=1.01$; $t(51)=-8.99$, $p<.001$), while businesswomen were seen more competent ($M=4.97$, $SD=1.10$) than warm ($M=3.36$, $SD=.95$; $t(51)=8.78$, $p<.001$). Homemakers were also rated as warmer but less competent than businesswomen, $t(51)=-8.72$, $p<.001$; $t(51)=8.39$, $p<.001$, respectively.

7.2.4 Relations among Participants' Implicit and Explicit Stereotype Contents, and Their Beliefs Regarding to Sexism

As seen in Table 9, the general pattern emerged in the first two study was replicated in participants' implicit and explicit scores. Correlations between implicit and explicit measures were not significant. The only exceptions were the significant negative correlations between the RTs in homemaker – warmth pair and ratings of businesswomen's competence ($r(52)=-.315$, $p<.05$), and between the RTs in businesswoman – competence pair and warmth ratings toward homemakers ($r(52)=-.276$, $p<.05$). These correlations were significant only in the single context, but not in the generic context. In the generic context, the only significant correlation between implicit and explicit scores was the positive correlation between participants' RTs in homemaker – competence pair and their warmth ratings toward homemakers ($r(52)=.303$, $p<.05$). All the correlations among participants' RTs were significant in both single and generic contexts ($r(52)$s$>.660$, $p<.01$). Similarly, correlations among participants sensitivity scores were significant in both contexts ($r(52)$s$>.467$, $p<.01$). Participants stereotype rating were highly correlated with each other, with the exception of non-significant correlation between warmth ratings toward homemakers and businesswoman ($r(52)=.229$, $p>.05$). Correlations among participants' sexism ratings were also significant except the non-significant correlation between GSJ and BS ($r(52)=.095$, $p>.05$).

Table 9. Correlations among participants' RTs, d prime scores, and ratings in Study 3

			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RTs	**1**	**HmComp**	—	.78***	.80***	.71***	.10	.17	.22	-.12	.14	.30*	.25	-.02	.04	.28*	.11
	2	**HmWarm**	.75***	—	.79***	.73***	.20	.23	.15	-.06	-.03	.02	.06	-.01	-.05	.05	-.06
	3	**BwComp**	.68***	.78***	—	.76***	.10	.12	.13	-.20	-.02	.14	.05	-.14	.11	.27*	.06
	4	**BwWarm**	.76**	.66***	.75***	—	.01	.13	.02	-.20	-.02	.00	.06	-.12	-.01	.19	.07
d primes	**5**	**HmComp**	.22	.01	.10	.11	—	.71***	.64***	.61***	-.18	-.02	.02	-.09	-.09	-.15	-.01
	6	**HmWarm**	-.04	-.16	-.14	-.04	.49**	—	.62***	.55***	-.16	-.02	.08	-.15	-.07	-.13	-.00
	7	**BwComp**	.06	-.05	-.03	.00	.47**	.59***	—	.59***	-.06	.08	.06	-.16	.08	-.06	.05
	8	**BwWarm**	.16	.04	.11	.14	.49**	.62***	.55***	—	-.10	-.10	-.01	-.01	-.02	-.08	-.19
Ratings	**9**	**HmComp**	-.00	-.06	-.12	-.07	-.02	-.14	-.16	-.23	—	.50**	.36**	.46**	.13	.15	.24
	10	**HmWarm**	-.19	-.26	-.28*	-.15	-.08	.01	-.21	-.19	.50**	—	.69**	.23	.41**	.50**	.45**
	11	**BwComp**	-.08	-.31*	-.18	-.12	-.00	.11	-.03	-.00	.36**	.69**	—	.18	.09	.38**	.40**
	12	**BwWarm**	.03	.05	-.15	-.09	-.18	-.14	-.07	-.14	.46**	.23	.18	—	.18	.04	-.03
	13	**GSJ**	-.08	-.04	-.10	-.11	-.10	-.09	-.11	-.09	.13	.41**	.09	.18	—	.38**	.09
	14	**HS**	-.19	-.22	-.10	-.31*	.00	-.06	-.18	-.23	.15	.50**	.38**	.04	.38**	—	.42**
	15	**BS**	-.10	-.31*	-.09	-.08	.14	.00	.01	-.14	.24	.45**	.40**	-.03	.09	.42**	—

* p<.05, ** p<.01, *** p<.001

HmPoz: Homemaker-Positive; **HmNeg:** Homemaker-Negative; **BwPoz:** Businesswoman-Positive; **BwNeg:** Businesswoman-Negative blocks. For Ratings, **HmComp:** Homemakers' competence; **HmWarm:** Homemakers' warmth; **BwComp:** Businesswomen's competence; **BwWarm:** Businesswomen's warmth

Note: The upper diagonal of the table shows the correlations in the generic context

7.2.5 Supplementary Analysis for Activation – Application Hypothesis

First two studies indicated that measurement context has a significant impact on implicit mixed stereotypes. However, the source of the context effect was not clear in these studies. It was assumed that Superordinate Category GNATs in Study 1 and Single Category GNATs in Study 2 was different in terms of their corresponding cognitive processes (i.e. spread of activation and response competition, respectively) and their level of implicitness (i.e. non-goal dependent activation of stereotypes and goal-dependent application of stereotypes, respectively). One way to investigate this assumption is to examine the pattern of the correlations between implicit and explicit measures (Neuman & Seibt, 2001). However, first two studies failed to support the expected pattern where correlations between implicit and explicit measures would be stronger in Single Category GNATs, most probably because of the self-presentation concerns. Another way to test this assumption was suggested by Brauer et al. (2000). In their study on activation-application distinction, they conducted factor analyses to investigate whether implicit measures of activation and application of stereotypes and explicit stereotype measures comprise a three factorial construct. A similar approach could be applied to the findings of Study 3, since implicit activation and application measures were presented in a within-subject design.

Two exploratory factor analyses with oblique (promax) rotation were conducted on participants' RTs and sensitivity scores. The first analysis on RTs showed that three factors with eigenvalues larger than one explained 66.42% of total variance. Loadings of variables on factors after rotation and percentages of variance explained were presented in Table 10. Participants' RTs in the Generic Category GNATs loaded highly on the first factor. The second factor was comprised of RTs in the Single Category GNATs. Participants' explicit ratings loaded on the third factor, except the ratings toward businesswomen's warmth. Factor analysis on participants' sensitivity scores revealed a similar pattern. Three factors with eigenvalues larger than one explained 57.38% of total variance. As shown in Table 11, sensitivity scores in Generic Category GNATs loaded in the first factor. The only exception was observed for businesswoman-warmth pairing, such that sensitivity scores for this

block were also loaded on the second factor. The second factor was represented by sensitivity scores gathered from Single Category GNATs. Finally, participants' explicit ratings loaded on the third factor, except the ratings toward businesswomen's warmth. In sum, factor structures of the present study were in line with Brauer et al. (2000), indicating that implicit measures aimed to assess implicit stereotypes at activation and application constitutes two different components of implicit prejudice.

Table 10. Factor loadings, eigenvalues and explained variance for exploratory factor analysis on participants' RTs in Study 3

Measures	Factor 1	Factor 2	Factor 3
BwComp_Generic	.92		
HmWarm_Generic	.89		
HmCmp_Generic	.86		
BwWarm_Generic	.83		
BwComp_Single		.90	
HmWarm_Single		.86	
HmCmp_Single		.84	
BwWarm_Single		.83	
HmWarm			.92
BwComp			.73
HmCmp			.57
BwWarm			
Eigenvalues	4.33	2.57	1.99
Variance Explained (%)	33.81	19.25	13.36

Table 11. Factor loadings, eigenvalues and explained variance for explanatory factor analysis on participants' sensitivity scores in Study 3

Measures	Factor 1	Factor 2	Factor 3
HmCmp_Generic	.98		
HmWarm_Generic	.81		
BwComp_Generic	.61		
BwWarm_Generic	.44	.43	
HmCmp_Single		.84	
HmWarm_Single		.69	
BwComp_Single		.68	
BwWarm_Single		.61	
HmWarm			.96
BwComp			.72
HmCmp			.53
BwWarm			
Eigenvalues	4.68	2.23	1.16
Variance Explained (%)	17.04	33.89	6.45

7.3 Discussion

The aim of the Study 3 was to replicate the context effect observed in first two studies and to support activation-application distinction in a within-subject design. Furthermore, it was also aimed to extend the findings of Superordinate Category GNATs in Study 1 to attribute comparative context in General Category GNAT.

Findings of Study 3 were straightforward, showing that context has a considerable impact on participants' GNAT performance. However, the direction of the context effect has changed in two different scoring paradigms. While participants' RTs showed that mixed stereotypes occurred only when homemakers and businesswomen are presented in a comparative manner (i.e. single context), participants' sensitivity scores did not confirm this pattern, showing that mixed stereotypes emerged in both contexts with the exception that the businesswomen were not associated with competence more strongly than homemakers in the generic context. Furthermore, the association strength of businesswoman and competence was not affected by context. All these findings require further consideration.

A possible source of the different patterns emerged in RTs and sensitivity scores could be the differing scoring algorithms. Considering that RTs were calculated from participants' correct Go responses (i.e. hitting the spacebar when the target stimulus belongs to one of the target categories), it could be seen that RTs do not include participants' false alarms and correct rejections. However, d scores depend on differences of correct categorizations and errors. For that reason, sensitivity scores were more sensitive to contextual effects on error rates. In fact, the significant main effect of context on participants' sensitivity showed that generic context contributed participants' categorization performance, most probably by reducing their false alarm rates and increasing their hit rates. That is, categorization was easier in generic context. In this case, one could argue that generic context is not strong enough to depict mixed stereotype contents in participants' RTs. In fact, Nosek and Banaji (2001) found that effect sizes were lower in the generic context than simple

(comparative) context. However, it should be noted that they did find implicit preference for fruits in both generic and single contexts.

An alternative explanation requires reconsideration of superior sensitivity in general context. A possible source of this superiority could stem from the fact that a distracter from general category should not interfere with participants' sensitivity and participants would have time to engage in a strategy to increase their hit rates. That is, in an easier task, participants' RTs would reflect facilitative impact of supraliminal presentation of target group on recognition of related attributes. Sensitivity scores, however, could reflect participants' strategy to deal with the distracters from opposite-attribute category (e.g warmth related traits when the target category was competence). One possible strategy is to use stereotypes regarding to homemakers' warmth and businesswomen's competence. Following from this point, one would speculate that RTs could be more sensitive to activation of stereotypes, while sensitivity scores would be a better indicator of application of stereotypic beliefs. In sum, the present finding of the superior sensitivity in the generic context could be regarded as a support for the discussion of that comparative Single Category GNAT is more akin to the cognitive interference measures, while non-comparative General Category GNAT resembles the direct measures of association..

Two indicators of activation-application were suggested by Neuman and Seibt (2001), and Brauer et al. (2000), namely (1) significant correlations between explicit ratings and implicit measures assessing implicit stereotypes at application level, and (2) three-factor structure of activation, application and explicit ratings. As the first two studies, Study 3 failed to support expected correlations between explicit ratings and implicit measures of stereotype application. The only exceptions were observed in single context were negative correlation between RTs for homemaker-warmth block and ratings toward businesswomen's competence, and between RTs for businesswoman-competence block and ratings toward homemakers' warmth in comparative context. These correlations indicated a compensatory pattern, such that the association of homemaker-warmth was followed by higher competence ratings for businesswomen and businesswoman-competence association went hand by hand

with higher warmth ratings for homemakers. A similar pattern was observed in the generic context, such that the positive correlation between RTs for homemaker-competence pair and warmth ratings toward homemakers indicated that lack of association between homemakers and competence was followed by higher warmth ratings toward homemakers. These findings implied that participants compensated their higher warmth attributions for homemakers and competence attributions toward businesswomen by exaggerating their competence and warmth ratings toward target groups (Judd et al., 2005; Yzerbyt et al., 2008).Even though, these cross-correlations were significant, expected correlations between implicit and explicit measures of competence and warmth were not significant (e.g. performance in homemaker-competence block was not significantly correlated with competence ratings toward homemakers.).

A possible source of the non-significant correlations observed in this study could be self-presentational concerns. Since the main purpose of the present dissertation is to investigate the mixed stereotypes suggested in SCM, trait ratings were preferred instead of subtle measures of prejudice toward women. Even though ASI and GSJT scales could be considered as more subtle measures, it should be noted that these scales originally developed to measure sexist ideologies (Glick & Fiske, 2001a; Jost & Kay, 2005). In fact, Brauer et al. (2000) also failed to observe significant correlations between implicit measures and ASI.

A second way to test activation-application hypothesis is to investigate the factor structure of the implicit and explicit measures (Brauer et al., 2000). Results of the explanatory factor analyses conducted on participants' RTs and sensitivity scores provided a direct support for activation-application hypothesis, such that participants' GNAT performances in general and single contexts loaded in two different factors. That is, findings of the Study 3 supported construct validity of application-activation hypothesis. However, it should be noted that non-significant correlations between explicit ratings and implicit performance in single context failed to provide support for predictive validity.

In sum, participants' implicit associations supported mixed stereotypes contents of homemakers and businesswoman, at least in the single/comparative context. However, it should be noted that in both single and generic context of Study 3, the target attributes were presented in a comparative manner, i.e. distracters of competence (warmth) was the warmth (competence) related traits. Thus, it is not clear whether mixed stereotype contents are a byproduct of the comparison on given attributes. Most importantly, findings of Study 2 and Study 3 do not provide any answer to the important question of whether associating businesswomen with competence but not warmth reflects an association between businesswoman and cold, or vice versa.

CHAPTER 8

STUDY 4

The main purpose of Study 4 is to investigate implicit stereotype contents in the context in which target groups, but not target attributes, were presented in a comparative manner. That is, target groups presented in a single context and target attributes were presented with distracters on the opposite-valence dimension. By this way, it was also aimed to investigate whether the association of a target group with a positive dimension goes hand in hand with the association with negative side of the other dimension. That is, whether associating homemakers (businesswomen) with warmth (competence) is followed by associating them with incompetence (cold). Finally, male participants were also recruited for Study 4, since Wade and Brewer (2006) found a tendency of male participants to favor homemakers on positive dimension and disfavor businesswomen on negative dimensions.

8.1 Method

8.1.1 Participants

One hundred and thirteen students (50 female and 55 male) were recruited from different departments of METU. Eight participants (5 female and 3 male) were discarded from the analysis because of their excessive number of errors. Remaining participants' ages ranged between 19 and 26 (M=21.60, SD=1.40) for females, and between 19 and 29 (M=22.60, SD=1.82) for males. Education level of participants' parents was quite high for both gender groups. Most fathers of females and males were graduated from university (48.00% and 47.30%, respectively), or high school graduates (24.00% and 32.70%, respectively). The percentage of primary school graduates, however, was relatively low (14.00% for females and 9.1% for males).

Similarly, most of the mothers were university (38.00% for females and 41.80% for males), or high school graduates (24.00% for females and 32.70% for males). However, percentage of primary school graduates was quite high (30.00% for females and 20.00% for males). The percentage of homemaker mothers was also quite high (56.00% for females and 43.60% for males).

8.1.2 Instruments and Procedure

All instruments and procedures were identical to Study 3, except for the distracters of target attribute in the Single Category GNAT sessions and the traits in the stereotype content scales. As seen in Table 2, only the single category was used as the distracter of target groups in study 4. Differing from the Study 3, the valence of the target attribute was also manipulated; such that participants required categorizing competence, incompetence, warmth and cold related traits as in the first study.

SCM scales were also modified to correspond to the negative traits in the GNAT sessions. Thus, participants rated the target groups on traits related to competent (i.e. Kararlı, Başarılı, Yetkin), incompetent (i.e. Hantal, Yetersiz, Acemi), warm (i.e. Sevecen, Samimi, İçten), and cold (Fesat, Kavgacı, Bencil). Negative traits were reverse coded. Reliabilities of the subscales were acceptable (for homemakers' competence and warmth α=.75 and α=.76, respectively; for businesswomen's competence and warmth α=.77 and α=.75, respectively).

8.2 Results

8.2.1 Stereotype contents in participants' RTs

A mixed ANOVA with repeated factors of target groups (businesswoman vs homemaker), target attributes (competence vs. warmth), valence of target attributes (positive vs negative) and a between subject factor of gender (male vs female) was conducted on participants log-transformed RTs. Means and standard deviations for participants' RTs in each block are seen in Table 12

Findings revealed a main effect of valence ($F(1,103)=11.63$, $p<.001$, $\eta^2=.101$), showing that participants responded faster in the positive attribute conditions ($M=538.93$, $SD=22.87$) than negative attribute conditions ($M=543.14$, $SD=22.49$). Interaction effect of target groups and valence was also significant ($F(1,103)=11.87$, $p<.001$, $\eta^2=.103$), showing that homemakers ($M=538.93$, $SD=25.89$) were associated with negative attributes more strongly than businesswomen ($M=547.35$, $SD=24.43$; $t(104)=-3.42$, $p<.001$). Similarly, the association of businesswoman and positive attributes ($M=537.36$, $SD=25.50$) was stronger than negative attributes ($M=547.35$, $SD=24.43$; $t(104)=-4.71$, $p<.001$). That is, participants did not associate businesswomen with negative attributes and they did not show such preference for homemakers. However, this effect was qualified by a significant three-way interaction of target group, target attributes and valence, $F(1,103)=26.23$, $p<.001$, $\eta^2=.203$. As seen in Figure 7, simple comparisons revealed that homemakers were related with incompetence ($M=538.12$, $SD=38.81$) more strongly than competence ($M=545.22$, $SD=41.74$; $t(104)=-2.62$, $p<.01$), and businesswomen were associated with competence ($M=534.07$, $SD=37.43$) more strongly than incompetence ($M=552.69$, $SD=45.03$; $t(104)=-6.77$, $p<.01$). Similarly, homemakers were associated with incompetence more strongly than businesswoman ($t(104)=-4.52$, $p<.001$), and association of businesswoman-competence was stronger than association of homemaker-competence ($t(104)=3.58$, $p<.001$, respectively). That is, participants' RTs reflected a tendency to favor businesswomen and to disfavor homemakers on competence dimension. On the warmth dimension, however, no significant difference observed.

Table 12. Means and standard deviations of participants' RTs, d prime scores, and ratings in Study 4

	Reaction Times						Sensitivity Scores						Trait Ratings		
	Positive			Negative			Positive			Negative					
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Homemaker															
Competence	545.22	41.74	105	538.13	38.81	105	2.55	.67	105	2.93	.67	105	3.91	.74	105
Warmth	535.77	36.79	105	539.74	40.40	105	2.95	.64	105	2.90	.66	52	5.58	.65	52
Businesswoman															
Competence	534.07	37.43	105	552.69	45.03	105	3.04	.64	105	2.63	.76	105	5.01	.64	105
Warmth	540.65	40.20	105	542.00	37.89	105	2.79	.75	105	2.97	.70	105	3.56	.70	105

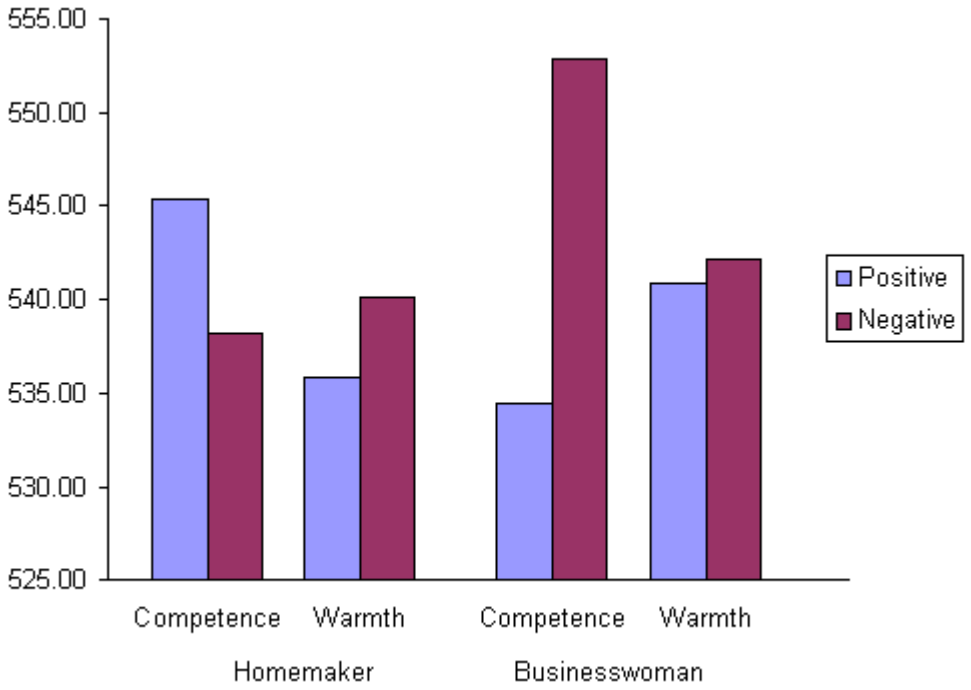

Figure 7. Means of participants' RTs in Study 4

Participants implicit preference scores were calculated as RTs in positive blocks minus RTs in negative blocks (i.e. negative scores represented preference on positive dimension), and one sample t tests were conducted on these scores. Results revealed that preference scores for homemakers and businesswomen significantly differed from zero for the competence related blocks ($t(104)=2.26$, $p<.05$ and $t(104)=-6.77$, $p<.001$, respectively), showing that businesswomen were favored on competence dimension while homemakers were disfavored on the same dimension. Neither homemakers nor businesswomen were favored on the warmth dimension.

8.2.2 Stereotype Contents in Participants' Sensitivity Scores

A mixed ANOVA with repeated factors of target group (businesswoman vs. homemaker), target attributes (competence vs. warmth), valence of target attribute (positive vs. negative) and a between-subject factor of gender (male vs female) was

conducted on participants sensitivity scores. Means and standard deviations for participants' sensitivity scores in each block are presented in Table 12.

Findings revealed a main effect of target attributes, showing that participants' categorization performance was better for warmth related attributes (*M*=2.90, *SD*=.55) than competence related ones (*M*=2.78, *SD*=.54; $F(1,103)=5.93$, $p<.05$, $\eta^2=.05$). Interaction of target attribute and gender was also significant ($F(1,103)=6.70$, $p<.01$, $\eta^2=.06$), indicating that female participants' sensitivity was higher for warmth related attributes (*M*=2.99, *SD*=.58) than competence related ones (*M*=2.73, *SD*=.52; $t(49)=-3.34$, $p<.01$). For males, no such difference occurred. Another significant interaction was between target group and target attribute ($F(1,103)=4.38$, $p<.05$, $\eta^2=.04$). Simple comparisons showed that participants' sensitivity was better when homemakers and warmth related attributes were paired (*M*=2.92, *SD*=.56) than when homemaker and competence was paired (*M*=2.73, *SD*=.57; $t(104)=-2.97$, $p<.01$). Additionally, participants' sensitivity scores for competence related attributes was better when these attributes were paired with businesswoman (*M*=2.83, *SD*=.61) than when they were paired with homemakers (*M*=2.73, *SD*=.57; $t(104)=-2.04$, $p<.05$). Interaction of target groups and valence was also significant ($F(1,103)=15.85$, $p<.001$, $\eta^2=.133$), showing that participants' sensitivity scores for homemaker – negative attribute pairings (*M*=2.91, *SD*=.55) were higher than homemaker – positive attribute pairings (*M*=2.75, *SD*=.50) and businesswoman – negative attribute pairings (*M*=2.80, *SD*=.60; $t(104)=-3.44$, $p<.001$, $t(104)=2.22$, $p<.05$, respectively). Furthermore, participants' sensitivity scores for businesswoman – positive attribute pairings (*M*=2.92, *SD*=.59) were higher than businesswoman – negative attribute pairings and homemaker – positive attribute pairings ($t(104)=2.60$, $p<.01$, $t(104)=-3.44$, $p<.001$, respectively). Thus, participants displayed a preference for businesswoman, but not for homemakers.

Most importantly, the interaction of target group, target attribute and valence was significant, $F(1,103)=56.32$, $p<.001$, $\eta^2=.35$. As seen in Figure 8, simple comparisons indicated that mixed stereotypes occurred for businesswomen at

implicit level, such that sensitivity scores for businesswoman-competence pairing (*M*=3.04, *SD*=.64) were higher than businesswoman-incompetence (*M*=2.63, *SD*=.76), businesswoman-warmth (*M*=2.79, *SD*=.75), and homemaker-competence (*M*=2.54, *SD*=.66; *t*(104)=6.04, *p*<.001, *t*(104)=3.31, *p*<.001, and *t*(104)=7.25, *p*<.001, respectively). Mixed stereotypes for homemakers were not supported at the implicit level. Simple comparisons revealed that sensitivity scores for homemaker-warmth pair (*M*=2.95, *SD*=.64) did not significantly differ from homemakers-cold (*M*=2.89, *SD*=.66; *t*(104)=.82, *p*>.05). However, the difference between the sensitivity scores for homemaker-warmth and homemaker-competence pairs was significant (*t*(104)=4.94, *p*<.001), indicating that homemakers were associated with warmth more strongly than competence. Homemakers were also associated with warmth more strongly than businesswoman (*t*(104)=2.18, *p*<.05). Finally, homemakers were related with incompetence more strongly than competence (*t*(104)=5.58, *p*<.001).

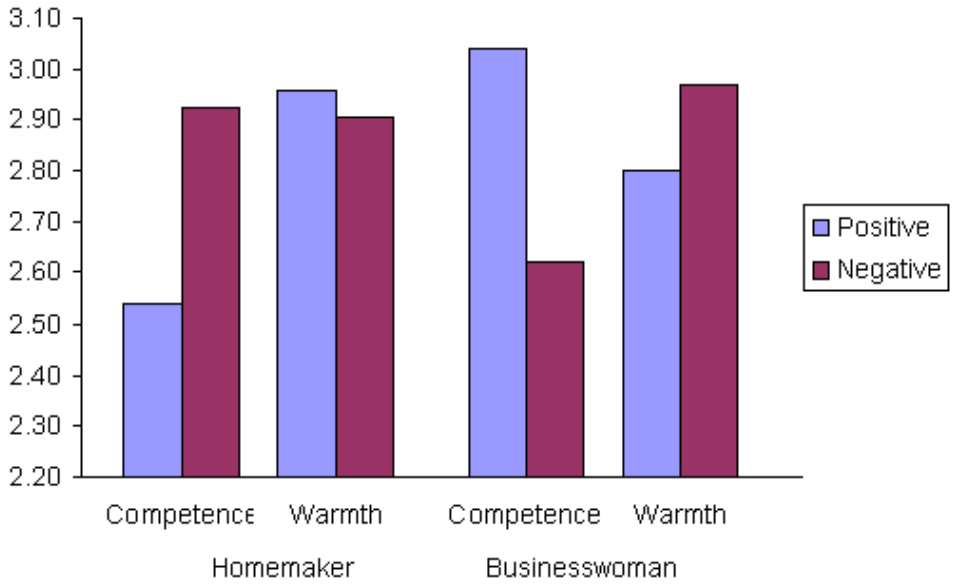

Figure 8. Means of participants' sensitivity scores in Study 4

One sample t tests revealed a similar pattern observed in ANOVA, showing that implicit preferences significantly differed from zero for homemaker-competence, businesswoman-competence and businesswoman-warmth parings (t(104)=-5.58, p<.001, t(104)=6.04, p<.001,and t(104)=-2.84, p<.01, respectively). Results indicated that businesswomen were favored on competence dimension, but disfavored on warmth dimension. Homemakers, however, disfavored only on the competence dimension, but not favored on warmth dimension.

8.2.3 Stereotype Contents in Participants' Trait Ratings

Participants' trait ratings were analyzed in a mixed ANOVA with repeated factors of target groups (businesswoman and homemaker) and stereotype contents (competence and warmth), and a between subject factor of gender (male vs. female). Means and standard deviations for participants' RTs in each block are seen in Table 12.

Findings revealed significant main effects of target attributes and gender (F(1,103)=59.04, p<.001, η^2=.364, F(1,103)=7.05, p<.01, η^2=.064, respectively), showing that participants competence ratings (M=4.46, SD=.49) were higher than warmth ratings (M=4.07, SD=.50), and female participants ratings (M=4.38, SD=.41,) were higher than males (M=4.16, SD=.41). Most importantly, the interaction of target groups and stereotype contents was significant. (F(1,103)=264.59, p<.001, η^2=.72). Simple comparisons showed that homemakers were rated as warmer (M=4.58, SD=.65) than competent (M=3.91, SD=74; t(104)=-8.60, p<.001), while businesswomen were seen more competent (M=5.01, SD=.63) than warm (M=3.56, SD=.70; t(104)=16.67, p<.001). Homemakers were also rated as warmer but less competent than businesswomen, t(104)=-11.47, p<.001; t(104)=11.66, p<.001, respectively.

8.2.4 Relations among Participants' Implicit and Explicit Stereotype Contents, and Their Beliefs Regarding to Sexism

Correlation coefficients were calculated to investigate the relations among participants' ratings and GNAT performance. Correlations among study variables were presented in Table 13. As in the first three studies, participants' implicit and explicit scores did not show a specific pattern. Most interestingly, participants GNAT performance in positive and negative trait pairing were positively correlated, indicating that association with a positive stereotype content does not reflect a lack of association with a negative content.

Table 13. Correlations among participants' RTs, d prime scores, and ratings in Study 4

			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RTs	**1**	**HmComp**	—															
	2	**HmNcomp**	.76**	—														
	3	**HmWarm**	-.13	-.06	—													
	4	**HmCold**	-.24*	-.11	.78**	—												
	5	**BwComp**	.72**	.72**	-.04	-.13	—											
	6	**BwNcomp**	.78**	.73**	-.26**	-.35**	.79**	—										
	7	**BwWarm**	-.24*	-.08	.73**	.78**	-.08	-.33**	—									
	8	**BwCold**	-.20*	-.11	.68**	.68**	-.12	-.29**	.72**	—								
d primes	**9**	**HmComp**	-.01	-.12	-.18	-.19	.00	.01	-.12	-.20*	—							
	10	**HmNcomp**	.01	-.12	-.22*	-.24*	.02	.16	-.24*	-.31**	.46**	—						
	11	**HmWarm**	-.42**	-.45**	.15	.24*	-.37**	-.40**	.33**	.20*	.16	.18	—					
	12	**HmCold**	-.33**	-.48**	.07	.08	-.33**	-.24*	.10	.07	.28**	.34**	.50**	—				
	13	**BwComp**	.13	-.01	-.21*	-.20*	.05	.13	-.19	-.24*	.43**	.54**	.19	.41**	—			
	14	**BwNcomp**	-.04	-.05	-.14	-.16	-.08	.01	-.12	-.19*	.57**	.39**	.10	.26**	.51**	—		
	15	**BwWarm**	-.28**	-.33**	-.08	-.01	-.32**	-.25*	-.05	-.04	.40**	.42**	.45**	.56**	.41**	.37**	—	
	16	**BwCold**	-.37**	-.49**	-.08	.06	-.42**	-.42**	.04	.02	.39**	.37**	.46**	.56**	.39**	.39**	.63**	—
Ratings	**17**	**HmComp**	-.12	-.07	-.06	.00	-.03	-.07	-.08	.08	.04	-.10	-.01	-.12	.02	.02	-.02	-.12
	18	**HmWarm**	-.11	-.12	.12	.19*	.06	-.03	.25*	.19	.07	-.03	.20*	.09	.02	.06	-.04	.11
	19	**BwComp**	-.15	-.21*	.02	.04	.04	-.06	.17	.19	.10	.19*	.32**	.20*	.16	.12	.20*	.25*
	20	**BwWarm**	-.03	-.08	.03	-.04	-.01	-.03	.05	.12	-.03	.09	.04	.07	.08	.08	-.04	.01
	21	**GSJ**	-.25**	-.16	.10	.09	-.15	-.16	.06	.15	.11	.01	.01	.00	-.05	.17	-.01	.06
	22	**HS**	-.01	.08	-.05	-.08	.08	.02	-.15	-.10	.10	-.07	-.12	-.18	-.07	.10	-.07	-.13
	23	**BS**	-.14	-.13	.11	.07	.01	-.12	-.01	.02	.09	-.08	.03	.15	-.12	.10	.06	.12

Table 13 (continued). Correlations among participants' RTs, d prime scores, and ratings in Study 4

			17	18	19	20	21	22	23
RTs	**1**	**HmComp**							
	2	**HmNcomp**							
	3	**HmWarm**							
	4	**HmCold**							
	5	**BwComp**							
	6	**BwNcomp**							
	7	**BwWarm**							
-	**8**	**BwCold**					-	-	-
d primes	**9**	**HmComp**							
	10	**HmNcomp**							
	11	**HmWarm**							
	12	**HmCold**							
	13	**BwComp**							
	14	**BwNcomp**							
	15	**BwWarm**							
	16	**BwCold**							
Ratings	**17**	**HmComp**	—						
	18	**HmWarm**	.34**	—					
	19	**BwComp**	.02	.30**	—				
	20	**BwWarm**	.21*	.09	.12	—			
	21	**GSJ**	.14	.22*	-.07	.20*	—		
	22	**HS**	-.03	-.01	-.06	-.16	.40**	—	
	23	**BS**	.01	.13	-.05	-.03	.32**	.36**	—

* p<.05, ** p<.01, *** p<.001

8.3 Discussion

The main purpose of the Study 4 was to investigate implicit stereotype contents in an attribute non-comparative context. Accordingly, the question of whether the association with a positive dimension was followed by negative attributions on the other dimension was examined. In other words, it was aimed to investigate whether implicit mixed stereotype contents occur at the negative side of the competence and warmth dimensions (White & Gardner, 2009). Furthermore, male participants were also recruited for Study 4 to replicate findings of Wade and Brewer (2006), showing that male students favor homemakers while and females favor businesswomen.

Findings of Study 4 provided a significant support for implicit mixed stereotype contents in participants' sensitivity scores, but failed to support in their RTs. On the positive dimensions, participants RTs and sensitivity scores revealed quite different patterns. While participants' response latencies did not support implicit mixed stereotypes, their d prime scores indicated that homemakers were associated with warmth and businesswomen were associated with competence. On the negative dimension, however, participants' RTs and sensitivity scores were in a similar line, showing no clear support for mixed stereotype contents, except that homemakers were associated with incompetence more strongly than businesswomen. More importantly, homemakers were related with incompetence more strongly than competence and businesswomen were associated with competence more strongly than incompetence. That is, lack of the homemaker – competence link was followed by homemaker incompetence link. A similar pattern for businesswoman – cold link emerged only in participants' sensitivity scores, showing that businesswomen were associated with cold more strongly than warmth.

Implicit preference scores were in line with ANOVA findings, showing that homemakers were associated with incompetence, while businesswomen were associated with competence. On the warmth dimension, homemakers' preference scores did not differ from zero for both RTs and sensitivity scores. For

businesswomen's warmth, however, RTs and d-primes revealed different patterns, showing that businesswomen were associated with cold on sensitivity scores, but not on the RTs.

The interaction of target groups, valence and gender was not significant for both RTs and sensitivity scores. That is, female and male participants did not differ in terms of the group they favored. In fact, interaction of target groups and valence indicated that both gender groups favor businesswomen over homemakers. In this sense, findings of Wade and Brewer (2006) were not supported in the present study.

Findings regarding participants ratings were in line with the first three studies, showing that participants' stereotype content ratings reflected LC/HW stereotype for homemakers and HC/LW stereotype for business woman. Participants' implicit and explicit scores were not correlated as in the first three studies.

In sum, implicit mixed stereotype contents seem to emerge on the positive dimension, especially for the competence dimension. On the negative side of the competence and warmth dimensions, however, mixed stereotypes were not clear. Furthermore, participants' RTs and sensitivity scores indicated that homemakers were disfavored on competence dimension, and businesswoman-cold link occurred only in d prime scores. In this sense, findings of Study 4 partially supported White and Gardner (2009), who found that implicit mixed stereotypes did not occur on negative competence and warmth. The present study, however, indicated that businesswomen and homemakers differ in terms of their association with incompetence, and homemakers were related more strongly with incompetence than warmth.

One possible inconsistency of these findings could be related to the differing measurement context used in White and Gardner (2009) and the present study. In their Modified Stroop Task procedure, White and Gardner (2009) primed only one group and examined the Stroop effect for positive and negative stereotype contents.

That is, target groups were presented in a non-comparative manner. In the present study, however, businesswomen and homemakers were presented in a single context. Considering that businesswomen' competence is defined by a relatively objective criterion, i.e. their status which was explicitly presented as administrative manager in the present studies, one would expect that presentation of a businesswoman as a distracter for homemakers could trigger homemaker-incompetence link. For instance, in the incompatible block of homemaker – competent, presentation of a businesswoman as a distracter could result in two competing responses, i.e. "Go" since businesswomen are competent and "No Go" since it is not a homemaker. Similarly, in the compatible block of homemaker – incompetent, presentation of businesswoman would trigger same response, i.e. "No Go" since businesswomen are competent and "No Go" since it is not a homemaker.

CHAPTER 9

STUDY 5

The aim of the Study 5 was to investigate the comparison and compensation tendencies. For this purpose, the order of the presentation of businesswomen and homemakers stereotypes were manipulated, such that participants were not aware that they were required to rate a second group. By this way, it was aimed to investigate the comparison effect on participants' ratings. It was expected that participants' second ratings would be affected by first ratings, in such a way that participants who rated homemakers at first would decrease their warmth ratings toward businesswomen in order to compensate their lower competence ratings toward homemakers. However, participants who rated businesswomen at first would exaggerate their warmth ratings toward homemakers to compensate their relatively high competence ratings toward businesswomen. Furthermore, it was expected that participants' level of BS and HS would moderate this relationships, such that the relationship between homemakers' competence and businesswomen's warmth would be stronger when participants HS was low, since HS reflects unfavorable attitudes toward untraditional women. However, the relationship between businesswomen' competence and homemakers' warmth would be stronger when participants BS was high, since BS is a kind of a reward for traditional women. In sum, Study 5 was aimed to examine the last three questions of present dissertation with the analytic strategies presented below,

> Q4: Do individuals compare the groups presented to them in terms of competence and/or warmth?

Strategy 1: The effect of the order of presentation was analyzed in an ANOVA model. Comparing the stereotypic ratings toward the target group presented first and second, it investigated that on which dimension participants compare businesswomen and homemakers

Q5: Do individuals compensate low-groups' unprivileged position on competence dimension by exaggerating their warmth ratings?

Strategy 2: The correlations between the stereotype contents of businesswomen and homemakers were examined in a regression model.

Q6: Do the system justifying ideologies take a role in compensatory relation between stereotypic evaluations of high-status and low-status groups?

Strategy 3: In a regression model, moderator role of the system justification motivation on the compensatory relation between competence and warmth ratings toward businesswomen and homemakers was examined.

9.1 Method

9.1.1 Participants and Procedure

Two-hundred and fifty nine participants were recruited from different departments of Okan University (135 females and 124 males). Participants' ages were ranged between 17 and 46 (M=21.11, SD=3.55) for females, and between 18 and 29

(*M*=21.65, *SD*=2.22) for males. Education level of participants' parents was relatively high for both gender groups. Most fathers were university (38.50% for females and 42.70% for males) or high school (30.40% for females and 30.60% for males) graduates. The percentage of primary school graduates, however, was relatively low (8.90% for females and 6.5% for males). Similarly, most of the mothers were university (23.00% for females and 29.80% for males), or high school graduates (37.00% for females and 34.70% for males). However, percentage of primary school graduates was quite high (18.50% for females and 19.40% for males). The percentage of homemaker mothers was high (63.70% for females and 57.30% for males).

The study was conducted in classroom setting. Participants received 2 credits for their voluntary participation. After the ratings section, participants were debriefed and thanked.

To investigate the comparison effect, the order of presentations of homemaker and businesswomen were manipulated. Participants rated homemakers and businesswomen on separated booklets and the first booklets were collected before the second booklet is presented. By this way, participants were not let to change their ratings in the first booklet. At the beginning of the study, participants were not informed about the second booklet and they were told that the aim of the study was investigate the general belief about women in society. By this way, participants were let to expect that they would rate only one group.

9.1.2 Instruments

Stereotype Contents: Content of the stereotype towards homemakers and businesswomen were assessed by using 11 adjectives (for competence: confident, competent, capable, skillful, intelligent, efficient; and for warmth: good natured, trustworthy, warm, sincere, well intentioned) adapted from Fiske et al. (1999; 2002) and Aktan and Güvenç (2008). Internal consistencies of the subscales were

acceptable (α=.81 and α=.83 for competence of homemaker and businesswomen, respectively, and α=.87 α=.89 for warmth of homemaker and businesswomen, respectively). The adjectives were rated on a 5-point Likert scale (1 = certainly not a characteristic of homemakers / businesswomen, 5 = certainly a characteristic of homemakers / businesswomen).

ASI: Participants asked to complete ASI as in the GNAT studies. Alpha coefficients showed that both BS and HS subscales' reliabilities were acceptable (α = .76 for BS and α = .82 for BS)

9.2 Results

To test the hypothesis that comparison lies behind the complementary stereotypes, 2 (Gender: Male vs. Female) X 2 (Order: Homemakers / Businesswomen vs. Businesswomen / Homemakers) X 2 (Target Groups: Homemakers vs. Businesswomen) X 2 (Stereotype Content: Competence vs. Warmth) mixed ANOVA with repeated measures on the last two factors was conducted. Means and standard deviations of participants' ratings were presented in Table 14.

This analysis yielded several main and interaction effects. First, a main effect of the order of presentation showed that presenting homemakers first decreased participants overall ratings, $F(1,255)= 23.77$, $p<.001$, $\eta^2 = .08$. However, a main effect of target groups indicated that homemakers were slightly favored, $F(1,255)= 4.21$, $p<.05$, $\eta^2 = .02$. A main effect of stereotype contents was also observed, such that participants' overall ratings of competence was higher than their ratings of warmth, $F(1,255)= 4.89$, $p<.05$, $\eta^2 = .02$.

Table 14. Means and standard deviations of participants' ratings in Study 5

Presentation Order	Gender	Homemaker				Businesswomen				N
		Competence		Warmth		Competence		Warmth		
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	
First Homemakers	**Male**	3.70	.87	4.23	1.00	4.30	1.16	3.28	.99	63
	Female	3.44	.92	3.80	1.07	4.58	.95	3.16	1.01	59
	Total	3.57	.90	4.02	1.05	4.43	1.07	3.22	1.04	122
First Businesswomen	**Male**	4.08	.96	4.77	.97	4.03	.79	3.82	1.00	61
	Female	3.95	1.00	4.70	.96	4.49	1.02	4.01	1.04	76
	Total	4.01	.98	4.73	.96	4.29	.95	3.92	1.02	137
Total	**Male**	3.89	.93	4.49	1.02	4.17	1.00	3.54	1.03	124
	Female	3.72	.99	4.30	1.10	4.53	.98	3.64	1.15	135
	Total	3.80	.96	4.39	1.06	4.35	1.01	3.59	1.09	259

All the two-way interactions in the model, except for the order of the presentation by gender interaction, were also significant. The gender by target groups interaction showed that males' ratings toward businesswomen were lower that females' and males favored homemakers more than businesswomen, $F(1,255)= 12.55$, $p<.001$, $\eta^2 = .05$. The gender by stereotype contents interaction indicated that females' ratings of competence for target groups were slightly higher than their warmth ratings, $F(1,255)= 4.41$, $p<.05$, $\eta^2 = .02$. The order by target groups interaction showed that even though presenting businesswomen at first resulted in more favorable ratings toward both businesswomen and homemakers, participants who first rated businesswomen increased their positive evaluations toward homemakers, $F(1,255)= 7.26$, $p<.01$, $\eta^2 = .03$. The interaction of order and stereotype contents indicated that while presenting homemakers at first exaggerated participants' competence ratings, presenting businesswomen at first resulted in higher warmth ratings, $F(1,255)= 40.40$, $p<.001$, $\eta^2 = .14$. Finally, the interaction of evaluated group and stereotype

content confirmed the mixed content of the stereotypes toward homemakers and businesswomen, such that while homemakers were rated as warmer than competent, businesswomen were evaluated as more competent than warm, $F(1,255)= 209.47$, $p<.001$, $\eta^2 = .45$.

Most importantly, the three-way interaction of order by target groups by stereotype contents was significant, $F(1,255)= 9.69$, $p=.001$, $\eta^2 = .04$. As seen in Figure 9, simple comparisons showed that being presented at the second order increased competence and warmth ratings toward homemakers but decreased warmth ratings toward businesswomen. However, businesswomen's competence was not affected by the order of presentation.

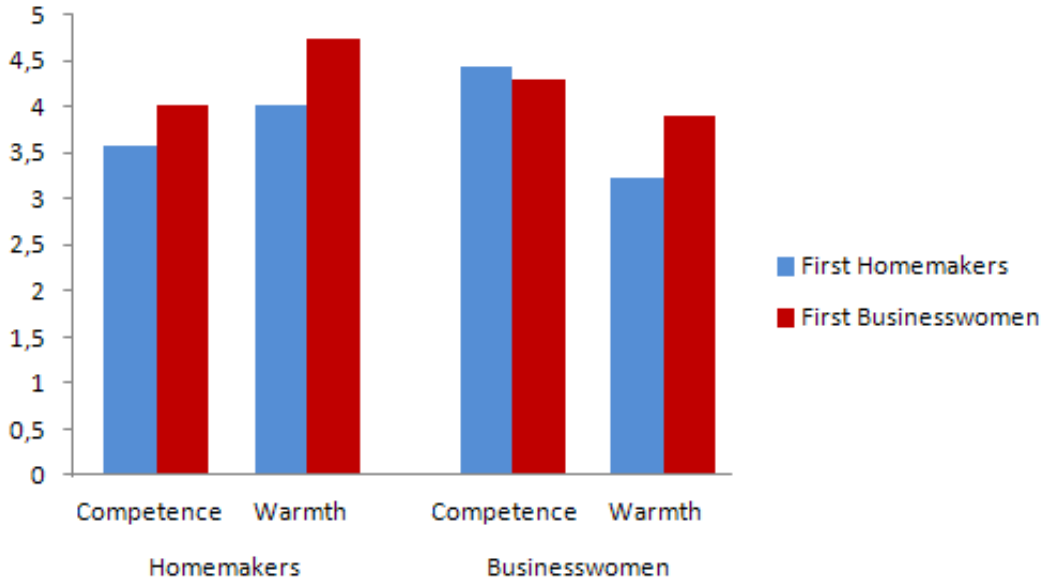

Figure 9. Means of participants ratings in Study 5

To investigate the compensation effect and its relation with sexist beliefs, four moderated regression analyses were conducted, in which participants' first ratings were introduced as predictors, their second ratings as criterion variables and their sexist beliefs as moderators. Following Aiken and West (1991), participants' competence and warmth ratings, and benevolent and hostile sexism scores were centered. These variables introduced in the first step and their two way interaction terms in the second. Standardized β coefficients and ΔR^2s were presented in Table 15.

Table 15. The interplay between participants' first ratings and their sexist belief on their second ratings in Study 5

	Homemakers				Businesswomen			
	Competence		Warmth		Competence		Warmth	
	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2
Step 1								
Businesswomen (Homemakers)								
Competence	.10	.17***	.07	.15***	.06	.07†	.26*	.18***
Warmth	.26**		.25**		.16		.15	
BS	.14†		.08		.16†		.17*	
HS	.17*		.22**		-.12		-.17†	
Step 2								
Businesswomen (Homemakers)								
Competence X BS	.01	.07*	.14†	.05†	.08	.04	.02	.08†
Competence X HS	-.06		-.02		-.11		.02	
Warmth X BS	.13		.04		.12		.24*	
Warmth X HS	-.22**		-.17†		-.03		-.24*	
	R^2Total=.24		R^2Total=.20		R^2Total=.11		R^2Total=.26	

†p<.10, * p<.05, ** p<.01, *** p<.001

The results related to the participants' ratings, who evaluated businesswomen at first, showed that homemakers' competence was significantly predicted by businesswomen's warmth (β = .26, p<.01) and HS (β = .17, p<.05) in the first step (R^2= .17, F (4, 134)= 6.70, p< .001). Contribution of the second step was also significant (ΔR^2= .07, ΔF (4, 130)= 3.13, p< .05), showing that the interaction between businesswomen's warmth and HS explained a significant incremental amount of variance in homemakers' competence (β = -.23, p<.01). To interpret the interaction, the simple slopes for the relationship between businesswomen's warmth and homemakers' competence were tested at one standard deviation below and above the mean HS (Aiken & West, 1991). As shown in Figure 10, results revealed that businesswomen's warmth significantly predicted homemakers' competence when participants' HS was low (β = .54, p<.001), but not when it was high (β = .11, p>.05). The second regression analysis showed that the level of businesswomen's warmth (β = .26, p<.01) and HS (β = .22, p<.01) predicted homemakers' warmth in the first step (R^2= .12, F (4, 134)= 5.74, p< .001). Contribution of the second step was marginally significant (ΔR^2= .05, ΔF (4, 130)= 2.16, p= .08), showing that HS moderated the relationship between the warmth ratings toward businesswomen and homemakers (β = -.17, p=.05). As shown in Figure 11, analysis of the simple slopes revealed that businesswomen's warmth predicted homemakers' warmth when HS was low (β = .45, p<.001), but not when it was high (β = .12, p>.05). More importantly, the interplay between businesswomen's competence and BS was marginally significant (β = .14, p=.09). As seen in Figure 12, businesswomen's competence contributed to homemakers' warmth more strongly when participants' BS was high (β = -.07, p=.54) than when it was low (β = .18, p=.12).

Two hierarchical regressions were conducted on participants' ratings when homemakers were presented at first and businesswomen at second. Similar to the previous regression, ratings toward the first group (i.e. homemakers) were introduced in the first step as predictors, as well as, the moderators (i.e. HS and BS). In the second step, two way interaction terms were introduced. Results of the first regression on businesswomen's competence revealed that the contribution of the first

step was marginally significant (R^2= .07, F (4, 121)= 2.40, p= .05), showing that the contribution of BS was marginally significant on businesswomen's competence (β = .16, p=.08). However, the contribution of the second step was not significant. The regression on businesswomen's warmth showed that contribution of homemakers' competence, BS and HS was significant in the first step (β = .26, p<.05, β = .17, p<.05, and β = -.17 p=.06, respectively; R^2= .18, F (4, 121)= 6.75, p< .001). The contribution of the second step was also significant (ΔR^2= .08, ΔF (4, 117)= 3.02, p< .05), showing that BS and HS moderated the effect of homemakers' warmth on businesswomen's warmth (β = .24 p<.05 and β = -.28, p<.05, respectively). As shown in Figure 13 and Figure 14, analysis of the simple slopes revealed that homemakers' warmth significantly predicted businesswomen's warmth when BS was high (β = .29, p<.05), but not when it was low (β = -.16, p>.05), and HS was low (β = .31, p<.05), but not when it was high (β = -.18, p>.05). The summary of the findings of moderated regressions were shown in Figure 15.

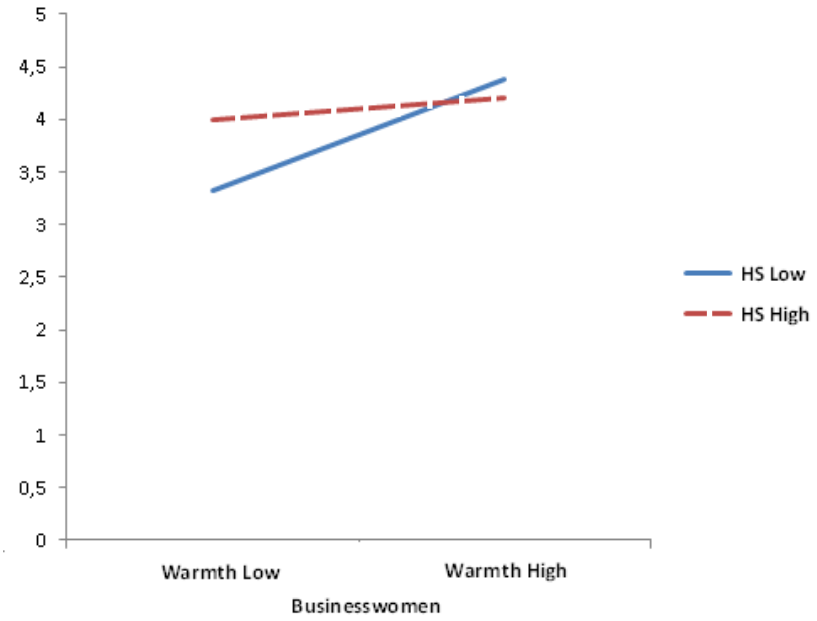

Figure 10. The interaction between businesswomen's warmth and HS on homemakers' competence in Study 5

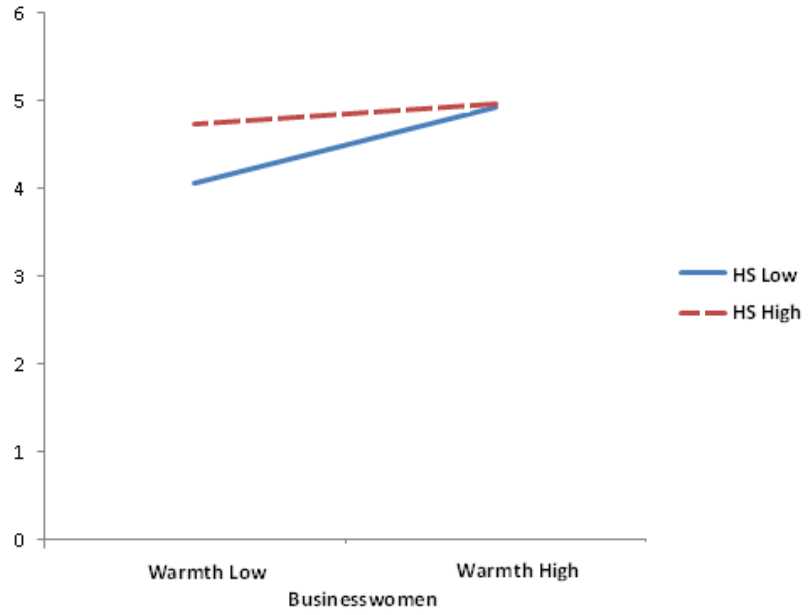

Figure 11. The interplay between businesswomen's warmth and HS on homemakers' warmth in Study 5

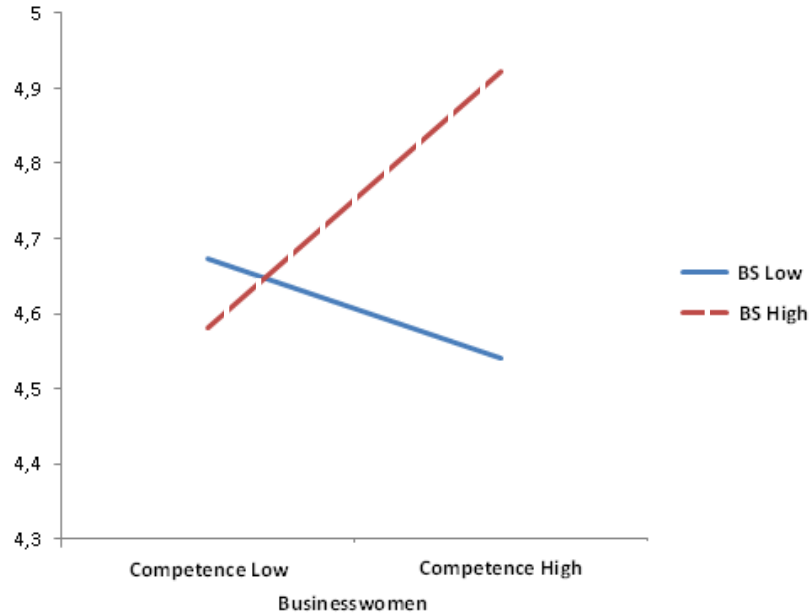

Figure 12. The interplay between businesswomen's competence and BS on homemakers' warmth in Study 5

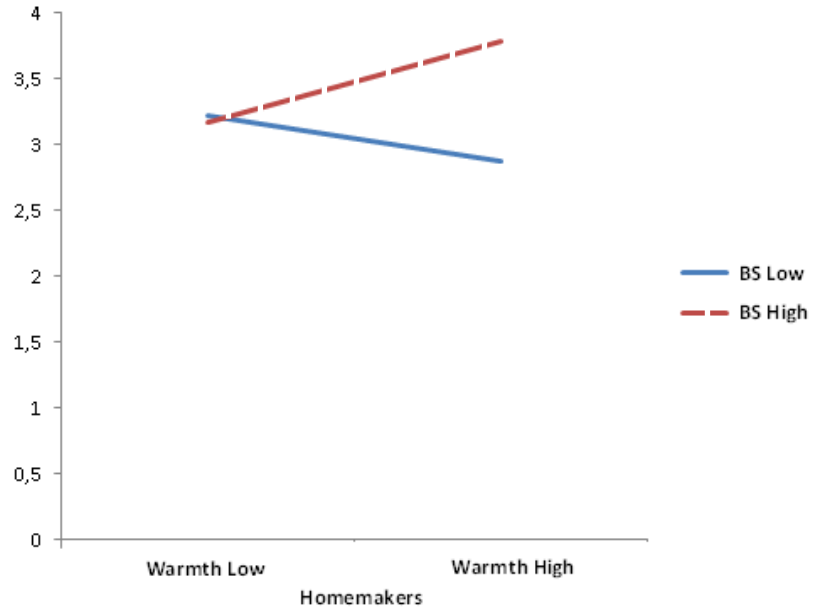

Figure 13. The interplay between homemakers' warmth and BS on businesswomen's warmth in Study 5

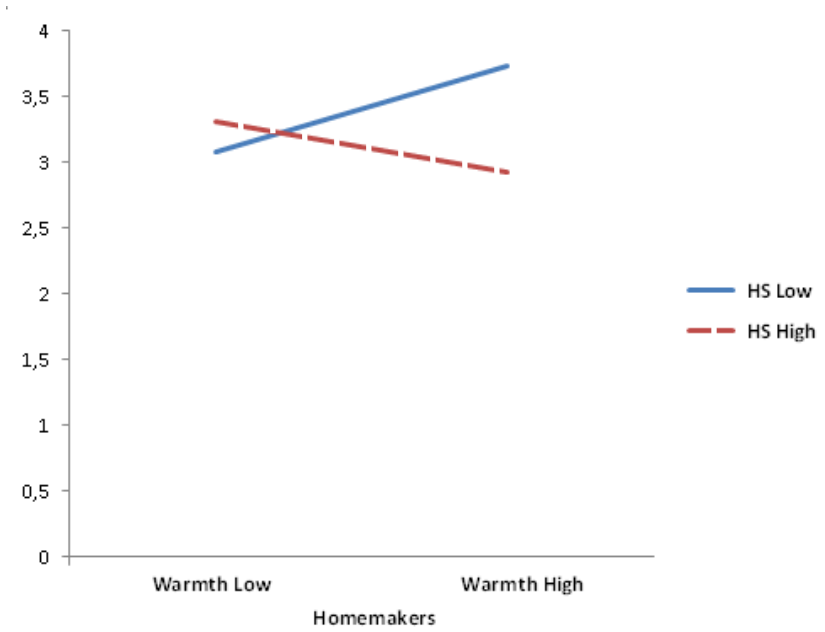

Figure 14. The interplay between homemakers' warmth and HS on businesswomen's warmth in Study 5

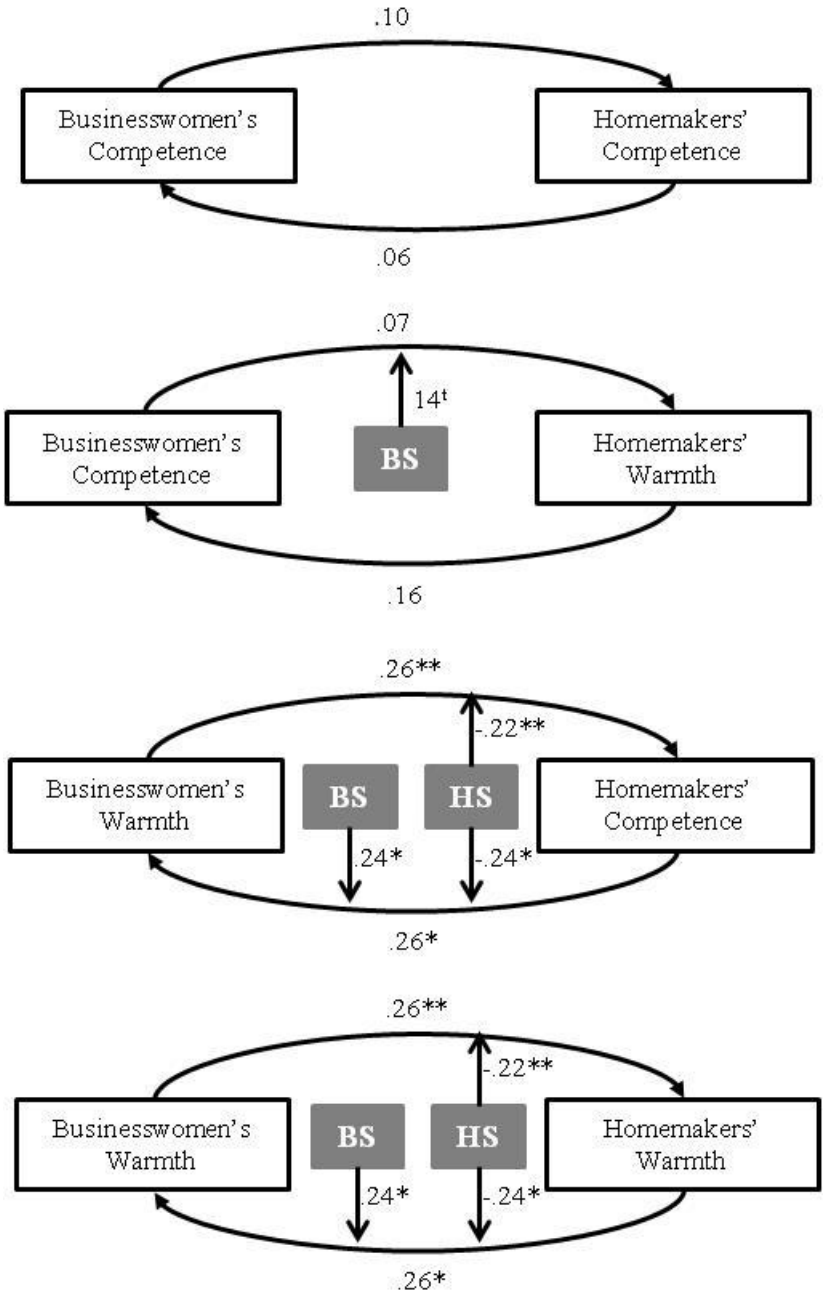

Figure 15. The summary of moderated regression findings in Study 5

9.3 Discussion

The purpose of the Study 5 was to investigate comparison and compensation in relation with system justifying ideologies, namely benevolent and hostile sexism. By manipulating the order of presentation, it was aimed to examine comparison and compensation separately. It was expected that participants would correct their first ratings toward high status group (i.e. businesswomen) by exaggerating their second ratings toward low status group (i.e. homemakers). It was also expected that high ratings toward low status group in the first order would influence ratings toward high status group in the second order.

The ANOVA findings are quite straightforward showing that participants compensate their first ratings by adjusting the competence or warmth of the second group. The general pattern of the two way interactions indicated that (1) females' favored businesswomen and they exaggerated competence ratings toward both women groups, (2) participants lowered their ratings in the second session of the study but they still favored homemakers even when presented later. The findings related to gender seems to be compatible with Wade and Brewer's (2006) findings showing that while males tend to favor traditional women (homemakers), females favors less traditional women groups. Furthermore, participants seem to compensate for their favorable ratings toward businesswomen in the first session by exaggerating their positive attitudes toward homemakers.

The three-way interaction of order, evaluated group and stereotype contents supported the notion that participants would compensate their first ratings by increasing their warmth ratings toward homemakers and decreasing their warmth ratings toward businesswomen in the second session. However, it was not expected that participants would regulate their competence ratings toward homemakers to compensate their favorable ratings toward businesswomen's competence.

By aim of the analytic strategy applied in the regression analysis, it was possible to investigate comparison and compensation separately. Regression on ratings toward homemakers' competence and warmth at the second order revealed a tendency that participants compared homemakers and businesswomen in terms of warmth, and they contrasted two groups by exaggerating warmth ratings toward homemakers, but not improving their competence ratings toward businesswomen. That is, participants seem to have contrasted homemakers and businesswomen on warmth dimension when they rated businesswomen first. In this sense, participants seem to use their warmth ratings toward businesswomen at the first order as an anchor for their warmth ratings toward homemakers at the second order, especially when their HS was low. However, participants' later competence ratings toward businesswomen were not related their earlier competence ratings for homemakers. It seems that businesswomen's competence is not bound to homemakers' competence. Furthermore, participants' warmth ratings toward homemakers at the first order increased their warmth ratings toward businesswomen, when BS was high or HS was low. In sum, findings indicated that participants used their warmth for the first group as an anchor for the second group. However, this pattern was not observed for competence ratings.

Following Yzerbyt et al. (2008), cross-correlations between both groups' competence and warmth were examined in the regression models to uncover the compensation tendency. Findings revealed that earlier warmth ratings of businesswomen improved later competence ratings of homemakers, especially when their HS was low. Most importantly their competence ratings toward businesswomen at the first order improved their warmth ratings toward homemakers, especially when their BS was high. Finally, competence ratings toward homemakers at the first order improved warmth ratings toward businesswomen.

In sum, relations between participants' first and second ratings indicate that they used their first ratings as an anchor for their second ratings. The only exception was observed for businesswomen's competence. Regression findings indicated that

neither homemakers' competence nor warmth was a criterion for businesswomen's competence. Coupling with ANOVA results, this pattern indicated that businesswomen's higher status might be seen as a more objective criterion for their competence (Ellemers, Baretto, & Spears, 1999). The compensatory relations between competence and warmth ratings toward both groups indicated that participants tended to balance their evaluation, especially when they have favorable attitudes toward women (i.e. higher BS and lower HS). More importantly, the interplay between businesswomen's competence and BS on homemakers' warmth was in line with Jost and Kay (2005), showing that only BS, but not HS, is related with system justification motivation. That is, participants with higher BS actively engaged in compensating their higher competence ratings for businesswomen by exaggerating their warmth ratings toward homemakers.

CHAPTER 10

STUDY 6

The aim of Study 6 was to show that the order of presentation effect stems from limiting participants' comparison and compensation in their first ratings. To support this notion, this time, participants were informed about the both groups which they would be required to rate. It was expected that since participants could compare both groups before their ratings, their ratings would not be influenced by the order of presentation of homemakers and businesswomen.

10.1 Method

10.1.1 Participants and Procedure

One hundred and sixty six participants were recruited from different departments of Okan University (103 females and 63 males) and they received 2 credits for their voluntary participation. Participants' ages ranged between 18 and 25 (M=21.28, SD=1.55) for females, and between 19 and 34 (M=22.41, SD=2.48) for males. Education level of participants' parents was relatively high for both gender groups. Most fathers of females and males graduated from university (44.70% and 33.30%, respectively), or high school (28.20% and 34.90%, respectively). The percentage of primary school graduates, however, was relatively low (13.60% for females and 6.3% for males). Similarly, most of the mothers were university (28.20% for females and 14.30% for males), or high school graduates (35.90% for females and 34.90% for males). However, percentage of primary school graduates was quite high

(23.30% for females and 17.50% for males). The percentage of homemaker mothers was high (55.30% for females and 71.40% for males)

The procedure was similar to Study 5, with the exception that participants were informed about both groups which they would be required to rate. To ensure they were aware of the target groups, participants were asked to write short essays about their impressions of homemakers and businesswomen. The questions were simple and aimed not to lead participants to compare target groups, especially in terms of their competence and warmth (i.e. "What do you think of homemakers (businesswomen)? Please write your impressions in two or three sentences").

10.1.2 Instruments

The same instruments in Study 5 were used to assess contents of stereotypes toward homemakers and businesswomen, and participants' level of BS and HS.

10.2 Results

In order to show that the order effect stems from limiting the comparison process, 2 (Gender: Male vs. Female) X 2 (Order: Homemaker/Businesswoman vs. Businesswoman/ Homemaker) X 2 (Evaluated Groups: Homemaker vs. Businesswoman) X 2 (Stereotype Content: Competence vs. Warmth) mixed ANOVA with repeated measures on the last two factors conducted. Means and standard deviations of participants' ratings were presented in Table 16.

Results showed that a main effect of gender indicating that females' ratings were higher than males' ratings, $F(1,162)= 6.70$, $p=.01$, $\eta^2 = .04$. The main effects of evaluated groups and stereotype contents were again significant, such that ratings toward homemakers were slightly higher than ratings toward businesswomen and

participants competence ratings were higher than warmth ratings, $F(1,162)= 3.99$, $p<.05$, $\eta^2 = .02$ and $F(1,162)= 9.72$, $p=.002$, $\eta^2 = .06$, respectively.

Table 16 Means and standard deviations of participants' ratings in Study 6

Presentation Order	Gender	Homemaker				Businesswomen				N
		Competence		Warmth		Competence		Warmth		
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	
First Homemakers	**Male**	3.94	.87	4.35	1.08	4.13	.95	3.47	1.03	37
	Female	3.73	.71	4.47	.77	4.69	.67	3.4	.87	58
	Total	3.81	.78	4.42	.90	4.47	.83	3.43	.93	95
First Businesswomen	**Male**	3.53	.77	4.25	.86	4	.81	3.57	.83	26
	Female	3.98	.78	4.54	.92	4.82	.76	3.61	1.06	45
	Total	3.82	.80	4.43	.90	4.52	.87	3.59	.97	71
Total	**Male**	3.77	.85	4.31	.99	4.08	.89	3.51	.95	63
	Female	3.84	.75	4.5	.83	4.75	.71	3.49	.96	103
	Total	3.82	.78	4.43	.90	4.49	.85	3.5	.95	166

The two-way interaction of gender and stereotype contents was again significant and showed that females competence ratings were higher than males' ones, $F(1,162)= 10.63$, $p<.001$, $\eta^2 = .06$. The evaluated groups X stereotype contents was also significant and it confirmed the mixed contents of stereotypes toward homemakers and businesswomen, such that while homemakers were rated as warmer than competent, businesswomen were evaluated as more competent than warm, $F(1,162)= 208.01$, $p<.001$, $\eta^2 = .56$. These two-way interactions were qualified by a significant three-way interaction of gender X evaluated groups X stereotype contents, $F(1,162)=$

14.17, $p<.001$, $\eta^2 = .08$. Simple comparisons showed that females' competence ratings toward businesswomen were higher than males' ratings. However, neither the main effect of presentation order nor its interactions were significant.

To investigate the compensation effect and its relation with sexist beliefs, four hierarchical regressions were conducted. The logic was similar to Study 5, with the exception that participants' earlier and later ratings were not separated, since the order of presentation was not significant. In the first two regressions, the centered ratings toward businesswomen were introduced as predictors in the first step, and the moderators were the centered BS and HS ratings. In the second step, their two way interaction terms were introduced. As seen in Table 17, results of the first regression revealed that businesswomen's warmth significantly predicted homemakers' competence in the first step ($\beta = .17$, $p<.05$) and contribution of businesswomen's competence was marginally significant ($\beta = .15$, $p=.06$; $R^2= .07$, $F(4, 165)= 3.22$, $p< .05$). The second step was also significant ($\Delta R^2= .08$, $\Delta F(4, 161)= 3.82$, $p< .01$), showing that BS and HS moderated the contribution businesswomen's warmth on homemakers' competence ($\beta = .19$, $p<.05$ and $\beta = -.23$, $p<.05$, respectively), and the interplay between businesswomen's competence and HS was marginally significant ($\beta = -.17$, $p=.07$). As seen in Figure 16, analysis of the simple slopes showed that businesswomen's warmth predicted homemakers' competence when BS was high ($\beta = .10$, $p<.01$), but not when it was low ($\beta = .02$, $p>.05$). The interaction between HS and businesswomen's warmth revealed a reversed pattern. As seen in Figure 17, that businesswomen's warmth predicted homemakers' competence when HS was low ($\beta = .40$, $p<.001$), but not when it was high ($\beta = -.02$, $p>.05$). As seen in Figure 18, the interplay between HS and businesswomen's competence indicated that businesswomen's competence predicted homemakers' competence when HS was low ($\beta = .34$, $p<.01$), but not when it was high ($\beta = -.00$, $p>.001$). The regression on homemakers' warmth showed that the only significant predictor was businesswomen's competence in the first step ($\beta = .28$, $p<.001$; $R^2= .11$, $F(4, 165)= 5.32$, $p< .001$), and contribution of the second step was not significant.

Table 17. The moderating role of sexist beliefs on the compensatory relation between ratings toward homemakers and businesswomen

	Homemakers				Businesswomen			
	Competence		Warmth		Competence		Warmth	
	β	ΔP^2	β	ΔP^2	β	ΔP^2	β	ΔP^2
Step 1								
Businesswomen (Homemakers)								
Competence	.15†	.07*	.28	.11***	.04	.12***	.15	.07*
Warmth	.17*		.11		.29**		.12	
BS	.01		-.03		.14†		.08	
HS	-.01		-.03		-.09		-.02	
Step 2								
Businesswomen (Homemakers)								
Competence X BS	.05	.08**	.03	.01	.11	.04	.28*	.06*
Competence X HS	-.17†		-.09		-.23		-.38**	
Warmth X BS	.19*		.08		-.15		-.18	
Warmth X HS	-.23*		-.04		.07		.17	
	R^2Total=.15		R^2Total=.12		R^2Total=.16		R^2Total=.13	

†p<.10, * p<.05, ** p<.01, *** p<.001

Two hierarchical regressions were conducted on the ratings of businesswomen, in which the centered ratings toward homemakers were the predictors. Results of the first regression on businesswomen's competence showed that homemakers warmth significantly predicted businesswomen's competence in the first step (β = .29, p<.01), and contribution of BS was marginally significant (β = .14, p=.09; R^2= .12, F (4, 165)= 5.54, p< .001). However, the second step was not significant. The second regression revealed that none of the predictors and mediators significantly predicted businesswomen's warmth in the first step, even though the contribution of the first step was significant (R^2= .07, F (4, 165)= 2.94, p< .05). However, the second step contributed significantly to the regression model (ΔR^2= .06, ΔF (4, 161)= 2.70, p< .05), showing that BS and HS moderated the relationship between homemakers' competence and businesswomen's warmth (β = .28, p<.05 and β = -.38, p<.01, respectively). As seen in Figure 19, analysis of the simple slopes revealed that homemakers' competence predicted businesswomen's warmth when BS was high (β = .36, p<.01), but not when it was low (β = -.16, p>.05). However, as seen in Figure 20, homemakers' competence predicted businesswomen's warmth when HS was low (β = .46, p<.001), but not when it was high (β = -.26, p>.05). The summary of the moderated regression findings were presented in Figure 21.

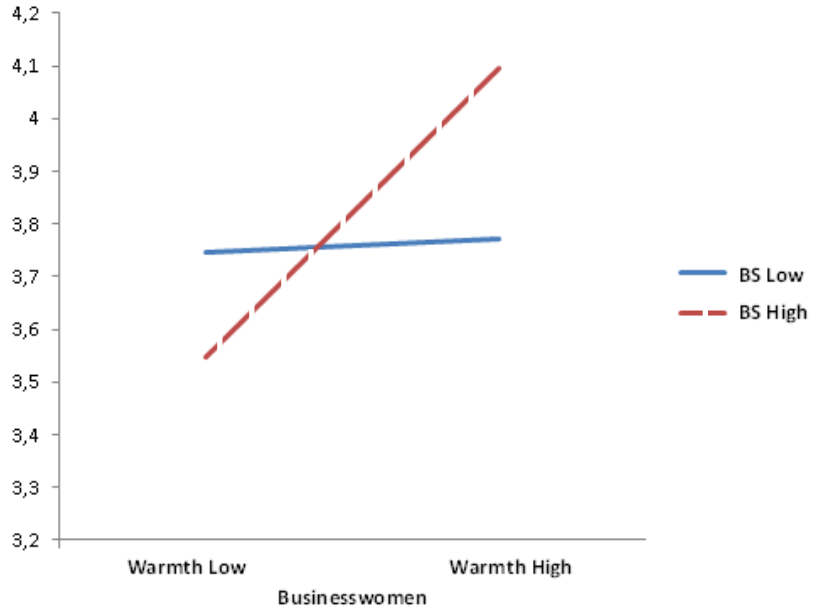

Figure 16. The interplay between businesswomen's warmth and BS on homemakers' competence in Study 6

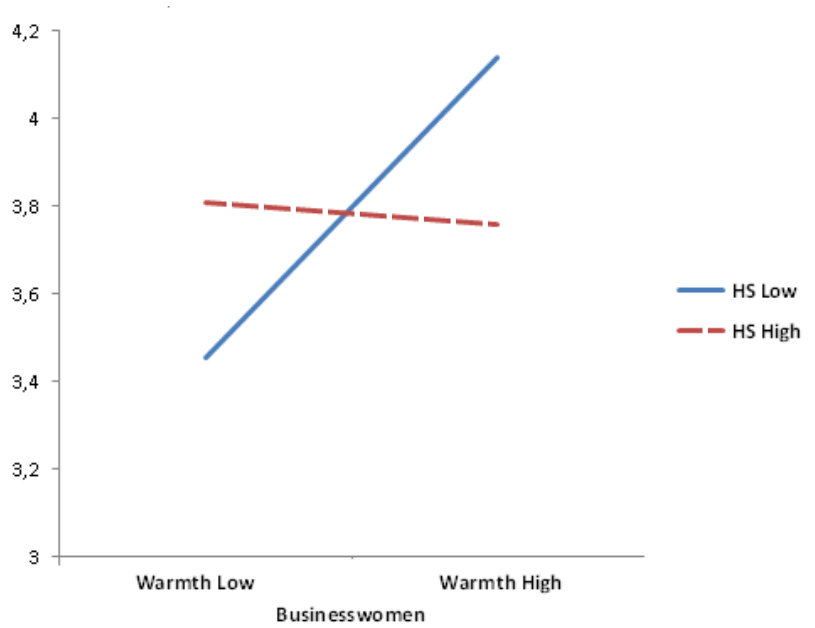

Figure 17. The interplay between businesswomen's warmth and HS on homemakers' competence in Study 6

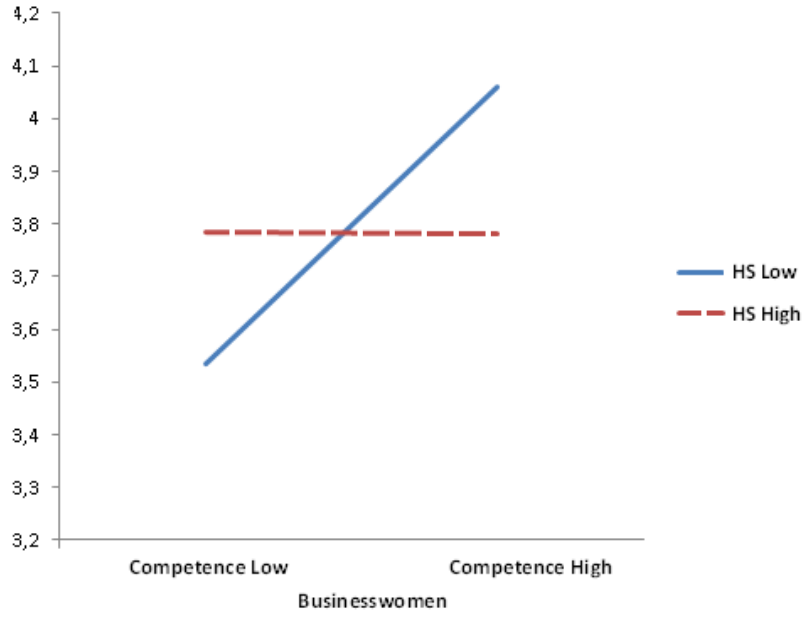

Figure 18. The interplay between businesswomen's competence and HS on homemakers' competence in Study 6

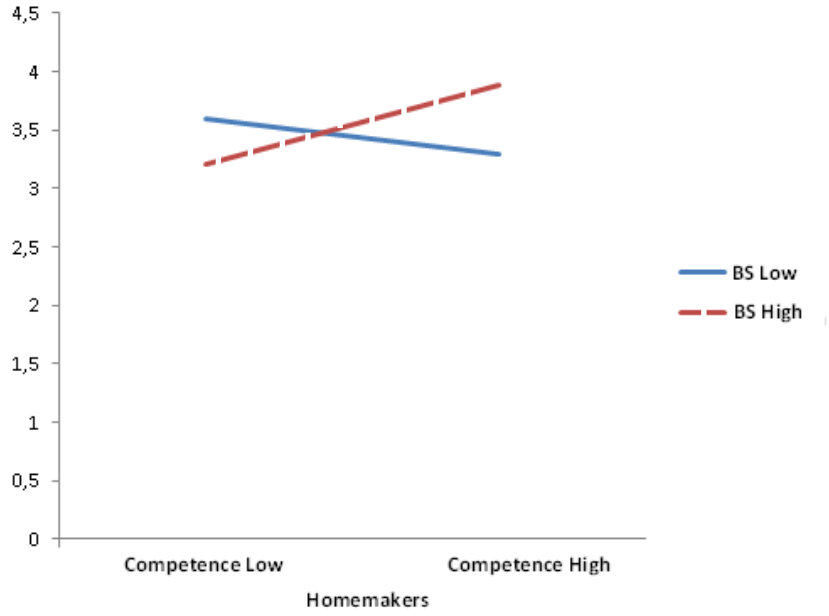

Figure 19. The interplay between homemakers' competence and BS on businesswomen's warmth in Study 6

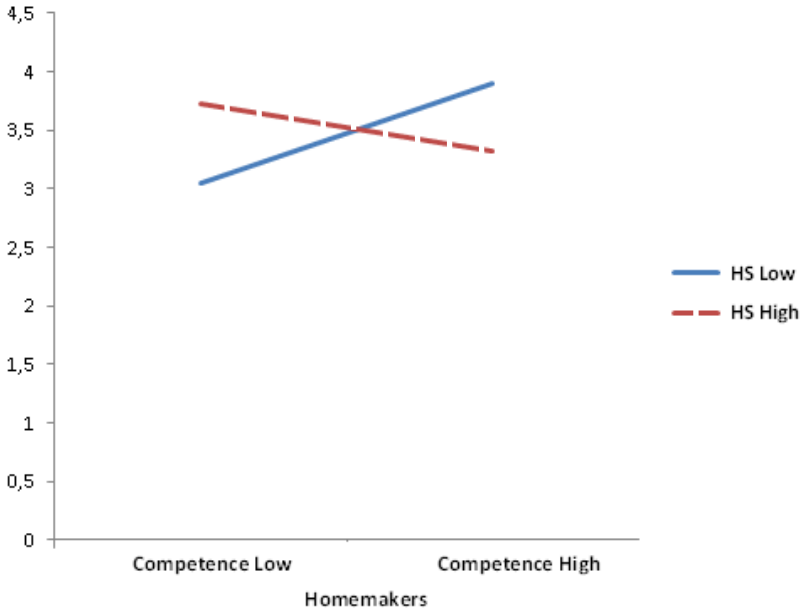

Figure 20. The interplay between homemakers' competence and HS on businesswomen's warmth in Study 6

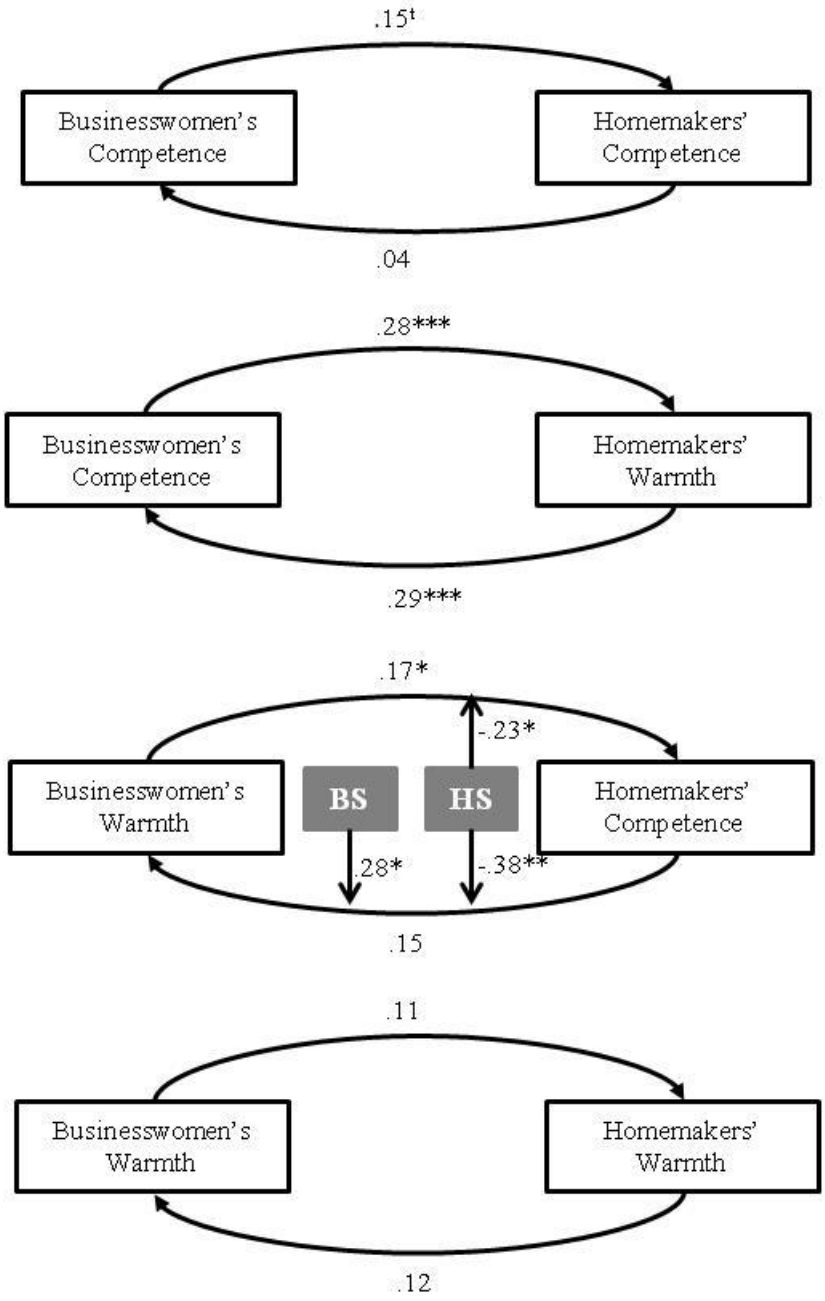

Figure 20. The summary of moderated regression findings in Study 6

10.3 Discussion

The aim of the Study 6 was to support the notion that unexpected order of presentation effect observed in SCM studies stems from limiting participants' comparison and compensation tendencies. To test this hypothesis, participants were explicitly informed about both of the groups which they would be required to rate. By this way, order of presentation effect and reciprocal relations among stereotype contents of homemakers and businesswomen were examined.

Findings showed that when participants were allowed to compare competence and warmth of two groups, their ratings were not affected by the order of presentation and reflected compensation tendency. As in Study 5, female university students favored businesswomen, especially on competence dimension. Regression analyses indicated that there was a direct compensatory relation between businesswomen's competence and homemakers' warmth. The compensatory relation between homemakers' competence and businesswomen's warmth, however, was moderated by participants' level of HS and BS, such the relationship between these ratings was significant when participants' level of HS was low or of BS was high. As was also observed in Study 5, it seems that higher competence ratings toward low status women group goes hand by hand with higher warmth ratings toward high status group, only when individuals holds positive attitude toward women. In fact, this tendency seems to reflect favoritism toward both female groups on both dimensions.

CHAPTER 11

GENERAL DISCUSSION

The aim of the present dissertation was to investigate cognitive and motivational underpinnings of mixed stereotype contents. In this purpose, six studies were conducted to elaborate mixed stereotypes toward homemakers and businesswoman. In the first four studies, cognitive processes related to implicit mixed stereotypes were investigated by manipulating the measurement context of GNAT. In the light of the previous studies on implicit mixed stereotypes, it was hypothesized that HC/LW and LC/HW stereotypes would emerged in comparative contexts in which response competition, rather than spread of activation, would shape participants' implicit attitudes. Considering the distinction between activation and application of stereotypes, it was concluded that implicit measures of stereotype application incorporate comparative contexts. In this sense, implicit mixed stereotypes were assumed to emerge at application level, but not at activation level.

Last two studies addressed the motivational underpinnings of mixed stereotypes. In these studies, comparison was related to compensation at explicit level. Accordingly, it was hypothesized that comparative measurement context at an explicit level would lead individuals to compensate for the unprivileged position of low status groups (i.e. LC/HW groups) on competence dimension by exaggerating their warmth ratings. Furthermore, it was expected that the compensation tendency would be related to system justifying believes, such that the link between businesswomen's competence and homemakers' warmth would be moderated by BS.

The unexpected order of presentation effect observed in SCM studies was used for separating comparison and compensation tendencies. In this respect, measurement

context in Study 5 was manipulated to limit participants' comparison tendency. By this way, it was investigated that whether individuals actively engage in correction of unbalanced dispersion of competence in a system justifying manner.

Findings of the studies provided significant insights about cognitive and motivational bases of mixed stereotypes. First of all, GNAT studies indicated that measurement context has a pivotal role in implicit stereotype contents. In this sense, first four studies reconciled the inconsistent findings of previous studies on implicit mixed stereotypes (Carlsson & Björklund, 2010; Wade & Brewer, 2006; White & Gardner, 2009). Secondly, the last two studies on the motivational bases of mixed stereotypes provided direct support for the notion that, individuals actively engage in compensation to justify existent status differences (Jost & Kay, 2005; Kay & Jost, 2003).

11. 1 The impact of Context on Implicit Mixed Stereotypes

The findings of the first two studies indicated that implicit mixed stereotypes occur in comparative measurement context, but not in non-comparative one. In the first study, both the target groups and target attributes were presented in a non-comparative context. Findings of this study were in line with Wade and Brewer (2006) showing that implicit mixed stereotypes did not emerge in a non-comparative context. Furthermore, participants' implicit preferences were shaped by the valence of the target attributes, such that female university students favored their reference group (i.e. businesswoman) on both dimensions, but especially on the competence dimension. In the second study, target groups and target attributes were presented in a comparative context. In the comparative context, participants' GNAT performance provided a straightforward support for implicit mixed stereotypes. Findings of the Study 2 showed that homemaker – warmth link was stronger than both homemaker – competence and businesswoman – warmth associations. In a similar vein, businesswoman – competence association was stronger than businesswoman – warmth and homemaker – competence associations. Thus, participants' implicit

stereotypes reflected well-known mixed stereotypes which were also observed in participants' explicit trait ratings. In this respect, findings of Study 2 replicated Carlsson and Björklund's (2010) IAT study.

The following two studies were aimed to probe the context effect. In Study 3, participants' implicit stereotype contents were examined in both a comparative (i.e single context) and a target non-comparative context (i.e. generic context). The Single Category GNATs in Study 3 was identical to Study 2. However, General Category GNATs were different from the Superordinate Category GNATs Study 1. Firstly, the non-comparative context in Study 3 was a generic context rather than a superordinate context. Secondly, target attributes were presented in a comparative manner, such that the distracters of the target attributes were the traits on the opposite dimension, rather than on the opposite valence. Findings of Study 3 showed that mixed stereotypes for homemakers and businesswomen were evident only in the comparative context. In the non-comparative context, however, mixed stereotype hypothesis of SCM was partly supported. While participants RTs showed no mixed pattern in the generic context, their sensitivity scores indicated that homemakers were associated with warmth and businesswomen with competence. However, homemakers were associated with competence as strongly as businesswomen.

In Study 4, target attributes were presented in a non-comparative manner while target groups were in a comparative context. On the positive attribute dimensions, participants' sensitivity scores reflected mixed stereotypes toward businesswomen and homemakers. On the negative dimensions, however, participants' RTs and sensitivity scores revealed different patterns. RTs indicated a direct preference for businesswomen and derogation for homemakers on competence dimension. Even though the sensitivity scores supported this pattern, they also revealed derogation for businesswomen on warmth dimension. Furthermore, homemaker-warmth link was not observed when negative warmth attributions were considered. In this sense, findings of Study 4 provided partial support for the findings of Modified Stroop Task

in White and Gardner (2009), showing that homemakers were not associated with incompetence and businesswomen were not associated with cold.

Overall findings indicated that mixed stereotypes toward businesswomen and homemakers occurs in the comparative context in which both target groups and target attributes were contrasted. It seems that Single Category GNAT in Study 2 and Study 3 provided the strongest context in which two competing response tendencies (i.e. Go and No Go) are primed simultaneously in incompatible blocks. The superordinate and generic context, however, seems to reflects the weakest context in which only one response tendency is primed and responses are mainly shaped by recognition performance (i.e. facilitative effect of activation). In this sense, incompatible findings of previous studies on implicit mixed stereotypes seem to stem from the measurement characteristics. Implicit tasks differing in terms of their measurement contexts would reveal differing patterns for mixed stereotypes at implicit level (Carlsson & Björklund, 2010; Wade & Brewer, 2006; White & Gardner, 2009).

In addition to provide a sound explanation to the previous incompatible findings, the GNAT findings of the present dissertation has significant implications. First of all, measurement characteristics seem to have pivotal role on implicit stereotypes. In this sense, findings of different implicit measures should not be regarded as equivalent (Brauer et al., 2000; De Houver, 2003). Findings of the GNAT studies were in line with this discussion, showing that different implicit context did not simply changed the magnitude of the observed associations. In fact, context manipulations influenced the quality of the associations, such that implicit measures revealed univalent stereotypes in one context, but mixed stereotype in the other context. Secondly, measurement context of an implicit task could be manipulated to capture implicit preferences at differing levels of stereotype activation and application. In this sense, malleability of implicit stereotypes seems questionable, since malleability at one level does not guarantee flexibility at the other level.

11.1.1 Measurement context and corresponding cognitive processes

Several cognitive processes were suggested to explain implicit task performance (De Houwer, 2003; Gawronski et al., 2005). Two well-known models are spread of activation and response compatibility. The first account suggests that supraliminal/subliminal priming a category label (i.e. a nod in the associative memory) would facilitate recognition of related attributes. That is, requiring participants to categorize pictures of businesswoman (homemaker) and traits regarding to competence (warmth) would increase their performance, since they have additive effect on recognition. Similarly, the second account suggests that relative strengths of two response tendencies would shape individuals performance, such that when two similar tendencies were reflected on the same channel, they would contribute the task performance and when two different tendencies assigned to the same response, individuals' performance would be impaired. For instance, presenting homemaker as the distracter of businesswoman would have contrastive effect on participants' performance and improve their categorization performance. Even though the outcome of these processes seems similar, their bound to context is quite different. Using the sequential priming paradigm, Gawronski et al. (2005) showed that comparative/contrastive context (i.e. positive-negative priming, instead of positive-positive priming) contributed task performance in Evaluative Priming Task.

On the basis of Schneider (2000) and Brauer et al. (2000), the present dissertation assumed that context manipulation in GNAT would capture these two processes, i.e. response incompatibility in Single Category GNAT and spread of activation in Superordinate and General Category GNAT. Furthermore, it was assumed that the former GNAT would capture stereotype contents at application level and the latter GNATs would assess these contents at activation level. The construct validity of this assumption was provided in Study 3, showing General and Single category GNATs loaded in two different factors. In line with Brauer et al. (2000), it was concluded that two different context in these GNATs corresponds to different cognitive

processes. The four GNAT studies, however, failed to support predictive validity for activation-application distinction. Following Neuman and Seibt (2001), it was expected that the implicit measures assessing stereotypes at application level would significantly correlated with explicit measures, since these implicit tasks correspond to goal dependent automatic processes.

Two well-known accounts for non-significant correlations between implicit and explicit measures are Devine's (1989) distinction of extrapersonal and personal beliefs and Fazio's MODE Model (Cunningham et al., 2001; Fazio & Olson, 2003). Both models suggest dissociation between implicit and explicit measures, since they reflect different processes, i.e. automatic and controlled processes, respectively. These models argue that lack of control on implicit performance would impair individuals' motivation to avoid prejudiced evaluations; that is the motivation which is much more apparent in explicit evaluations. In this respect, dissociation models seem similar in terms of their conceptualization of automaticity. The underlying assumption of these models is that a behavior is either automatic or not. Differing from these arguments Brauer et al. (2000) applied Bargh's (1994) distinction of non-goal-dependent and goal-dependent automaticity to implicit stereotypes. In this sense, it could be suggested that non-goal dependent automatic activation of stereotypes resembles the automaticity held in dissociation models. Parallel with this argument non-significant correlations in Superordinate and Generic Category GNATs could be regarded as a support for (1) dissociation approach, and (2) the notion that non-comparative GNATs are direct association measures assessing implicit stereotypes at activation level (De Houwer, 2003; Schneider, 2004). However, it should be noted that participants' performance in Single Category GNAT would be expected to be correlated with explicit ratings, since goal-dependent application of stereotypes would be more sensitive to motivational and contextual concerns (Bargh, 1994; Neuman & Seibt, 2001). Nevertheless, this expected pattern was not observed in the present GNAT studies.

This expectation was not supported in Study 2 and Study 3, most probably because the aim of the explicit stereotype ratings was quite obvious for the participants. For that reason, self-presentational concerns might lead the observed discrepancy. However, it should be noted that there is no subtle form of stereotype content scales. Furthermore, subtle measures of sexism are not necessarily correlated with implicit stereotype measures of specific gender groups (Brauer et al., 2000). In future studies, a better predictive criterion should be used to validate activation-application distinction for implicit mixed stereotypes.

An interesting finding of the GNAT studies was the discrepancy between participants' RTs and sensitivity scores. With the exception of the Single Category GNATs in Study 2 and Study 3, participants' sensitivity scores and RTs were not correlated and they depicted different patterns for mixed stereotypes. This discrepancy might be artificial, since these scores has different scoring algorithms. Given that RTs do not take false alarm into account, it could be expected that sensitivity measures (i.e. score of the difference between hits and false alarms) and RTs would not be correlated. Considering the response competition hypothesis, however, it would be expected that participants' false alarm rates and RTs would reflect speed-accuracy trade-off in Single Category GNATs. Given that the distracters in the incompatible blocks of Single Category GNATs in Study 2 would trigger two competing responses, participants would increase their RTs in order to decrease their false alarms. In fact, the false alarm rates and RTs were significantly correlated in Study 2 (for homemaker $r(59)= -.30$, $p<.05$, and for businesswoman $r(59)= -.34$, $p<.01$). In terms of the spread of activation hypothesis, however, false alarm rates and RTs would not be necessarily correlated; since lack of activation in incompatible blocks would not result in false alarms when sufficient response window was provided. In line with this expectation, the correlations between false alarm rates and RTs were not correlated in Study 1 (for homemaker $r(65)= .09$, $p>.05$, and for businesswoman $r(65)= .04$, $p>.05$).Thus, it seems that sensitivity scores and RTs in non-comparative context corresponds to different cognitive processes. Following from this point, one would speculate that sensitivity scores

would be more appropriate tool to measure cognitive interference than RTs, and RTs would be more suitable for facilitation.

In sum, findings of the GNAT studies indicates that Single Category GNAT in Studies 2 and 3 seem to differ from the Superordinate GNAT in Study 1 in terms of the corresponding cognitive processes. The only attribute comparative context in General Category GNAT in Study 3 and only target comparative context in Single Category GNAT in Study 4 seems to take place between these weakest and strongest context. In this respect, mixed stereotype contents seem to emerge most robustly in the target and attribute comparative context, in which presumably application of stereotypes was measured.

11.1.2 Measurement characteristics or malleability?

The present GNAT findings have also significant implications for the malleability of implicit stereotypes. Differing from the previous studies showing that context determines which subtype (e.g. a black lawyer or a black prisoner in Barden et al.,2004) or which aspect of a stereotype (e.g. Asian or women stereotypes for an Asian-woman in Macrae et al., 1995; and black or women stereotypes for a black-woman in Mitchell et al., 2003) would be evident in implicit measures, the present studies provided a straightforward support for a qualitative shift in stereotypes at the implicit level. That is, the associations of the very same target group were univalent in non-comparative context, but ambivalent in the comparative context. Considering the different cognitive processes embedded in differing implicit tasks, however, one would question whether context effect in GNAT sections reflects malleability of implicit stereotypes or simply a measurement error.

Even though this question seems reasonable, its underlying assumption regarding the notion of “True Prejudice” has significant limitations. First of all, no social group exits in a vacuum which renders their evaluations keep constant in various situations (Ellemers & Van Kinppenberg, 1997). In fact, stereotypes toward many groups make

sense in a given situation or context (Mcgarty, Yzerbyt, & Spears, 2004). For instance, a homemaker would be seen as talented in a domestic role, but incompetent in a work-related role. What delimits this variation, however, could be the restriction of social reality. Once intergroup context was defined by apparent status differences (Ellemers et al., 1997) or intergroup threat (Stephan et al., 2009), individuals implicit and explicit stereotypes would reflect these "objective" realities. For instance, the businesswoman-competence link might reflect such shared beliefs. In fact, in four GNAT studies this link was much more robust than homemaker-warmth link.

In sum, GNAT studies in the present dissertation provided significant support for qualitative change in implicit stereotypes. Findings indicated that implicit stereotype contents toward businesswomen and homemaker were constructed in the given context, such that homemakers were associated with warmth (in Study 2 and Study 3) and incompetence (in Study 4) when they were compared to businesswomen, and businesswomen were associated with competence (in all GNAT studies) and cold (in Study 4) when they contrasted with homemakers.

11.2. Motivational Underpinnings of Mixed Stereotypes

The second part of the dissertation was devoted to the motivational basis of mixed stereotypes. In line with Judd et al. (2005), it was suggested that comparison and compensation tendencies would shape mixed stereotypes. In this sense, the impact of the comparative context in GNAT studies was expected to lead participants to compare two presented groups in terms of their competence and warmth, and then compensate apparent differences to provide a balanced evaluation. On the basis of SJT, it was expected that the compensation tendency would be more apparent in the relation between high status groups' competence and low status groups' warmth (i.e. businesswomen and homemakers in the present studies) Furthermore, it was suggested that compensation tendency would be moderated with system justifying beliefs regarding women.

In study 5, presentation order of target groups was manipulated, such that participants were not aware of the second group that they would be required to rate. The impact of the context manipulation was apparent in evaluations toward homemakers, such that being presented after businesswomen improved competence and warmth ratings toward them. For businesswomen, however, being presented at the second order impaired their warmth ratings, but did not influence their competence ratings. Regression analyses indicated that neither homemakers' competence nor their warmth was an anchor for businesswomen's competence. Most importantly, cross-correlations between competence and warmth ratings toward businesswomen and homemakers indicated that participants tended to balance their evaluations toward these groups. Furthermore, competence ratings toward businesswomen at the first order predicted higher warmth ratings toward homemakers when participants' BS was high.

Findings of Study 6 supported comparison and compensation tendencies, indicating that when individuals' comparison tendency was not limited, they balance their evaluations toward high and low status groups.

11.2.1 Compensation as an Active Strategy in a Given Context

One of the core tenets of SJT is that individuals are motivated to justify existent status quo (Jost, Banaji, & Nosek, 2004; Jost & Hunyady, 2005). Prevalence of mixed or complementary stereotypes is suggested as a reflection of this motivation (Fiske et al., 2002). Another reflection, however, is compensatory relation between competence and warmth dimensions (Judd et al., 2005). Even though there is growing interest in mixed stereotypes, there is an ambiguity regarding their relation with system justification motivation. While these ambivalent beliefs were simply admitted as a consequence of system justification motivation in some studies (Fiske et al., 2002; Judd et al., 2005; Yzerbyt et al., 2008), in the other studies it was shown that system justification motivation is triggered by these beliefs. The only direct support for strategic use of mixed stereotypes to justify status quo was provided by

Jost et al. (2005). They showed that individuals actively engage in justifying existing status differences by increasing stereotypical differentiation (i.e. the difference between competence and warmth). However, they did not investigate the compensatory relation between competence and warmth evaluations and the impact of system justification motivation on this relation.

The present studies on motivational bases on mixed stereotypes fill this gap by showing that system justification is an active tendency and moderated by system justifying ideologies. Findings indicated that individuals actively engage in compensation of low status groups' unprivileged position on competence by improving their warmth ratings. However, the opposite pattern was not valid for warmth evaluations. That is, higher warmth attributions toward low status group were not followed by higher competence ratings toward high status groups in Study 5. In this sense, compensation seems not to be a context-free tendency. Rather, it seems to be bound the restrictions of the social reality (Ellemers et al., 1997).

11.3 Limitations

A significant limitation of the GNAT studies was the explicit measurements. Differing from previous studies on the relationship between implicit and explicit measures, explicit stereotype contents were measured by using trait ratings. For that reason, self-presentational concerns inevitably influenced participants' ratings. Since, there is no subtle form of stereotype content scales; the predictive validity for application hypothesis was not supported. In the future researches, a better criterion should be chosen to relate explicit and implicit stereotype contents.

Another limitation of the GNAT studies was related to non-comparative attribute context. Since the original GNAT was developed to measure implicit preferences, the distracters for attribute category are chosen from opposite-valence category. In fact using general category as distracter for attribute category may impair GNAT effect significantly (Nosek and Banaji, 2001). For that reason, the opposite-valence

attribute categories were hold as non-comparative context in the present studies. However, one would argue that negative attributes could provide a comparative context for either target groups or target attributes. In the future researches, direct association measures could be used to deal with this limitation, since most of these tasks do not require a related distracter for attribute category.

In fact, such a measure would provide balanced support for the activation-application distinction. Considering that GNAT is eventually a categorization task which mainly designed to measure cognitive interference, it is not clear whether implicit mixed stereotypes would occur in a direct association measure in which measurement context was manipulated to correspond comparative context. Sequential priming paradigm in which the first and the second priming is contrasted would provide a direct support for this argument (Gawronski et al., 2005).

One of the most important limitations of Study 5 and Study 6 was that the halo effect could not be controlled. For that reason, participants competence and warmth ratings were highly correlated. The halo effect might responsible for the lack of negative correlation between mixed stereotype contents. A reasonable source of the halo effect could be related to measurement characteristics of stereotype content scales. In standard SCM scales competence and warmth is presented as two subscales. Furthermore, all items in the scales are in positive direction. In the future studies, halo effect could be avoided by presenting competence and warmth scales separately and adding negative items in both scales.

In conclusion, the GNAT studies underlined comparison as an important base of mixed stereotypes. In this sense, incompatible findings of previous studies on implicit mixed stereotypes seem to stem from differing measurement contexts and corresponding cognitive processes. The rating studies related comparison to individuals' active engagement in compensation. Findings of the present dissertation indicated that mixed stereotype contents are individuals' active constructions in a given context.

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Appendix 1. Stimulus pictures of target and distracter groups in Study 1.

Businesswoman

Homemaker

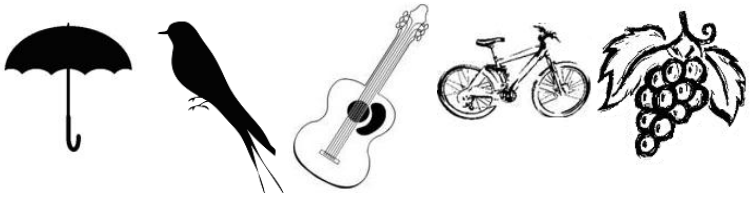
Superordinate Category (Woman)

Appendix 2. Stimulus pictures of target and distracter groups in Study 2 and 3.

Businesswoman

Homemaker

Generic Category



Appendix 3. Stereotype Content Scales for Businesswomen and Homemakers

Aşağıda, yönetici pozisyonundaki "**İş Kadınları**" ile ilgili bazı sıfatlar sunulmuştur. Sizce, İş Kadınları bu özelliklere ne derece sahiptir? Aşağıdaki derecelemeyi kullanarak belirtiniz.

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ----------6

Kesinlikle İş Kadınlarının özelliği **değildir**

Kesinlikle İş Kadınlarının **özelliğidir**

Kararlı	1	2	3	4	5	6
İnsancıl	1	2	3	4	5	6
Sevecen	1	2	3	4	5	6
Zeki	1	2	3	4	5	6
Samimi	1	2	3	4	5	6
Yetkin	1	2	3	4	5	6
Becerikli	1	2	3	4	5	6
İçten	1	2	3	4	5	6
Yeterli	1	2	3	4	5	6
Dürüst	1	2	3	4	5	6
Candan	1	2	3	4	5	6
Uzman	1	2	3	4	5	6

Aşağıda, herhangi bir işte çalışmayan "**Ev Kadınları**" ile ilgili sıfatlar sunulmuştur. Sizce, Ev Kadınları bu özelliklere ne derece sahiptir? Aşağıdaki derecelemeyi kullanarak belirtiniz.

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ----------6

Kesinlikle Ev Kadınlarının özelliği **değildir**

Kesinlikle Ev Kadınlarının **özelliğidir**

Kararlı	1	2	3	4	5	6
İnsancıl	1	2	3	4	5	6
Sevecen	1	2	3	4	5	6
Zeki	1	2	3	4	5	6
Samimi	1	2	3	4	5	6
Yetkin	1	2	3	4	5	6
Becerikli	1	2	3	4	5	6
İçten	1	2	3	4	5	6
Yeterli	1	2	3	4	5	6
Dürüst	1	2	3	4	5	6
Candan	1	2	3	4	5	6
Uzman	1	2	3	4	5	6

Appendix 4. Gender Specific System Justification Scale

Lütfen her bir ifade ile ne derece hemfikir olup olmadığınızı verilen ölçekteki sayılardan uygun olanı işaretleyerek belirtiniz.

1 ---------- 2 ---------- 3 ---------- 4 ---------- 5 ----------6

Kesinlikle katılmıyorum Kesinlikle Katılıyorum

1. Genellikle kadınlarla erkekler arasındaki ilişkiler adildir.	1	2	3	4	5	6
2. Ailelerdeki iş bölümü genellikle olması gerektiği gibidir.	1	2	3	4	5	6
3. Geleneksel kadın-erkek rollerinin tümüyle yeniden yapılandırılması gerekir.	1	2	3	4	5	6
4. Türkiye, dünyada kadınların yaşayabileceği en iyi ülkelerdendir.	1	2	3	4	5	6
5. Cinsiyet ve cinsiyete dayalı iş bölümüyle ilişkili politikaların çoğu, toplumun gelişmesine yardımcı olur.	1	2	3	4	5	6
6. Kadın veya erkek herkes adil bir fırsata, zenginliğe ve mutluluğa sahiptir.	1	2	3	4	5	6
7. Toplumdaki cinsiyetçilik her yıl daha da kötüye gidiyor.	1	2	3	4	5	6
8. Toplum, kadın ve erkeklerin hak ettiklerini genellikle elde ettikleri şekilde düzenlenmiştir.	1	2	3	4	5	6

Appendix 5. Tez Fotokopisi İzin Formu

TEZ FOTOKOPİSİ İZİN FORMU

ENSTİTÜ

Fen Bilimleri Enstitüsü ☐

Sosyal Bilimler Enstitüsü ☐

Uygulamalı Matematik Enstitüsü ☐

Enformatik Enstitüsü ☐

Deniz Bilimleri Enstitüsü ☐

YAZARIN

Soyadı : Aktan
Adı : Timuçin
Bölümü : Psikoloji

TEZİN ADI: Compensatory nature of mıxed stereotypes: An ınvestıgatıon of underlyıng mechanısms ın the framework of stereotype content model

TEZİN TÜRÜ : Yüksek Lisans ☐ Doktora ☐

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir. ☐
2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir. ☐
3. Tezimden bir bir (1) yıl süreyle fotokopi alınamaz. ☐

TEZİN KÜTÜPHANEYE TESLİM TARİHİ:

Appendix 6. Curriculum Vitae

CURRICULUM VITAE

PERSONAL INFORMATION

Surname, Name: Aktan, Timuçin
Nationality: Turkish (TC)
Date and Place of Birth: 10 June 1980, İstanbul
Marital Status: Maried
email: timucinaktan@gmail.com

EDUCATION

Degree	Institution	Year of Graduation
MS	Hacettepe University Social Psychology	2006
BS	Mersin University Psychology	2004
High School	Fatih Vatan Lisesi, İstanbul	1997

WORK EXPERIENCE

Year	Place	Enrollment
2006-2009	Okan University	Research Assistant

FOREIGN LANGUAGES

Advanced English (ÜDS 97,5)

PUBLICATIONS

Güvenç, G., Aktan, T. ve Gezici, M. (2010). The relationship between knowledge structures and appraisals of economically disadvantaged adolescents. *Applied Psychology: An International Review*, 59, 594 – 615.

Şirvanlı-Özen, D. ve Aktan, T. (2010). Bağlanma güvenliği ve zorbalık sisteminde yer alma: başa çıkma stratejilerinin aracı rolü. *Türk Psikoloji Dergisi*, 25, 101-113.

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Appendix 7. Turkish Summary

ÖZET

Yakın dönemdeki kalıpyargı literatüründe kalıpyargı içeriklerine yönelik artan bir ilgi dikkat çekmektedir. Kalıpyargı içeriklerinin dökümünün yapıldığı geçmiş çalışmalardan farklı olarak, yeni dönem çalışmalarında söz konusu inanç sistemlerinin içeriğini oluşturan temel boyutların belirlenmesi yönünde bir çaba dikkat çekmektedir (Alexander, Brewer, ve Livingston, 2005; Fiske, Cuddy, Glick, ve Xu, 1999; 2002; Phalet ve Poppe, 1997; Wojciszke, 2005). Bu doğrultuda, Kalıpyargı İçeriği Modeli (KİM) toplumdaki çeşitli gruplara yönelik kalıpyargı içeriklerinin temel boyutları olan yetkinlik ve sevecenlik üzerinde belirlenebileceğini belirtmekte, ve böylece kalıpyargıların gerek sosyal-yapısal belirleyicileri, gerekse bu inanç sistemlerinin duyuşsal ve davranışsal çıktıları hakkında bütünsel bir bakış açısı sağlamaktadır (Fiske ve ark., 1999; 2002).

Yürüttükleri çeşitli çalışmalarda Fiske ve ark. (1999; 2002) kalıpyargı içeriklerinin yetkinlik ve sevecenlik boyutları üzerinde kavramsallaştırılabileceğini göstermiştir. Bununla birlikte, grupların statüsünün algılanan yetkinliği yordadığını, gruplar arasındaki yarışmacılığın ise sevecen olarak algılanmama ile ilişkili olduğunu göstermişlerdir. Son olarak, toplumdaki çeşitli gruplara yönelik kalıpyargıların 2X2'lik bir düzlemde resmedilebileceğini belirten Fiske ve ark. (2002), yüksek yetkin ve yüksek sevecen (YY/YS) gruplara yönelik olarak hayranlık, yüksek yetkin ve düşük sevecen (YY/DS) olarak algılanan gruplara kıskançlık, düşük yetkin ve yüksek sevecen (DY/YS) görülen gruplara merhamet ve son olarak düşük yetkin ve düşük sevecen (DY/DS) gruplara ise hor görme yönünde duygular beslendiğini göstermişlerdir.

Söz konusu kalıpyargı kümelerinden karışık içerikli olan YY/DS ve DY/YS kalıpyargılarının, statü açısından farklılaşan gruplara yönelik telafi edici inançları resmettiğini belirten Fiske ve ark. (2002), bu gibi inançları değiştirmek için yapılan çabaların var olan sosyal sisteme bir tehdit olarak algılanacağını belirtmekte, bu yüzden de karışık içerikli kalıpyargıların değişime dirençli olduklarını savunmaktadır (Jost, Banaji ve Nosek, 2004). Fiske ve ark. (1999; 2002) her ne kadar KİM ile ilgili önemli bir destek sağlamış olsalar da takip eden çalışmalar kalıpyargı içerikleri ile sosyal-yapısal değişkenler arasındaki ilişkiyi (Aktan ve Güvenç, 2008; Cuddy ve ark., 2009; Durante, 2008) ve kalıpyargı içeriklerinin karşılık geldiği bilişsel süreçler (Harris ve Fiske, 2007; Wade ve Brewer, 2006; White ve Gardner, 2009) hakkında kuramla uyuşmayan sonuçlar ortaya koymuştur. Bu gibi bulgular, kalıpyargı içeriklerinin bilişsel yapılardan çok değerlendirmeye dayalı boyutlar olduğuna dikkat çekmektedir.

Sunulan tez çalışmasında karışık içerikli kalıpyargıların altında yatan bilişsel ve motivasyonel süreçleri incelemek amaçlanmıştır. Tezin ilk bölümünde karışık içerikli kalıpyargıların altında karşılaştırma sürecinin yattığı önerilmiştir. Bu doğrultuda yürütülen dört çalışmada örtük ölçüm bağlamı değişimlenerek karışık içerikli kalıpyargılar incelenmiştir. Tez çalışmasının ikinci bölümünde karşılaştırma süreci telafi etme eğilimi ile ilişkilendirilmiştir. Bu amaçla yapılan iki çalışmada katılımcıların karşılaştırma yapma eğilimi sınırlandırılarak telafi etme eğilimlerinin nasıl şekillendiği ve sistemi meşrulaştıran inançların (Çelişik Duygulu Cinsiyetçilik) söz konusu eğilim üzerindeki etkisi incelenmiştir.

Karışık İçerikli Kalıpyargıların Bilişsel Temelleri

Örtük ölçüm tekniklerini kullanarak karışık içerikli kalıpyargıların bilişsel temellerini inceleyen çalışmalar birbiri ile tutarlı olmayan bulgulara ulaşmıştır. Bu çalışmalardan birinde Wade ve Brewer (2006) Sözcük Karar Görevini (SKG-Lexical Decision Task) kullanarak ev ve iş kadınlarına yönelik DY/YS ve YY/DS kalıpyargılarını incelemiştir. Çalışma sonuçları, örtük düzeyde yetkinlik ve

sevecenlik boyutlarının ayrışmadığını göstermiştir. Bir diğer çalışmada, White ve Gardner (2009) Cinsiyeti Belirginleştirme Paradigması (Gender Salience Paradigm) kullanarak katılımcılarından Stroop Görevini yerine getirmeleri istenmiştir. Çalışmanın sonuçları kalıpyargı içeriklerinin pozitif yetkinlik ve sevecenlik boyutlarında ayrıştığını, ancak negatif boyutta böyle bir örüntünün izlenmediğine işaret etmiştir. Örtük kalıpyargı içeriklerine doğrudan destek sağlayan bir çalışmayı ise Carlsson ve Björklund (2010) yürütmüştür. Okul öncesi öğretmenleri ve avukatlara yönelik kalıpyargıları Örtük Çağrışım Testi (ÖÇT-Implicit Association Task) ile inceleyen araştırmacılar YY/DS ve DY/YS şeklindeki karışık içerikli kalıpyargıları gözlemeyi başarmıştır.

Bu çalışmalarda kullanılan örtük ölçüm teknikleri incelendiğinde karışık kalıpyargı içeriklerini desteklendiği iki görevin SKG'dan önemli ölçüde farklılaştığı görülmektedir. ÖÇT ve Stroop Görevi gibi görevlerde hedef grup ya da özellikler karşılaştırılmalı olarak sunulmakta ve verilen uyaranın ortaya çıkardığı iki olası tepkinin birbirine göre gücü ölçülmektedir. SKG'da ise ateşleyici uyaranın tanıma performansı üzerindeki kolaylaştırıcı etkisi ölçülmektedir (Schneider, 2004). Bu noktadan hareketle Brauer, Wasel ve Niedenthal (2000) ilk türden görevlerin kalıpyargının aktivasyonu düzeyinde, ikinci türden görevlerin ise aynı kalıpyargının uygulanma düzeyinde ölçüm yaptığını belirtmektedir. Aktivasyon düzeyi, algılayıcının amacından bağımsız olarak kalıpyargıların otomatik aktifleşmesi ile ilgiliyken, uygulama düzeyi kalıpyargının algılayıcının amacı ile ilişkili olarak hedef kişiye uyarlanması ile ilgilidir (Bargh, 1994)

Sunulan tez çalışmasında Brauer ve ark. (2000) tartışması dikkate alınarak örtük kalıpyargı içerikleri incelenmiş ve geçmiş çalışmalardan elde edilen tutarsız sonuçların ölçüm bağlamı ile ilişkili olduğu önerilmiştir. Bu amaçla yürütülen dört çalışmada Go / No Go Çağrışım Görevi (Go / No Go Association Task-GNAT) kullanılarak ölçüm bağlamı değişimlenerek ev ve iş kadınlarına yönelik örtük kalıpyargılar incelenmiştir. Böylece, tez çalışmasının üç sorusuna yanıt aranmıştır:

S1: Hedef grup ve özellikler karşılaştırma içermeyen bir bağlamda sunulduğunda kalıpyargı içerikleri bireylerin örtük kategorileme performansında gözlenmekte midir?

S2: Hedef gruplar karşılaştırmalı bir şekilde sunulduklarında kalıpyargı içerikleri bireylerin örtük kategorileme performansında gözlenmekte midir?

S3: Hedef özellikler karşılaştırılmalı şekilde sunulduklarında kalıpyargı içerikleri bireylerin örtük kategorileme performansında gözlenmekte midir?

Çalışma 1

Birinci çalışmada, sunulan tez çalışmasının ilk sorusuna yanıt aranmıştır. Bu amaçla yürütülen Üst Kategory GNAT oturumlarına 71 kadın öğrenci katılmıştır. GNAT oturumlarında hedef grup olan iş ve ev kadınının çeldiricisi olarak üst kategoriden (kadın kategorisi) uyaranlar kullanılmıştır. Özellik kategorileri olan yetkinlik ve sevecenliğin çeldiricisi olarak ise bu boyutların negatif ucundan sıfatlar sunulmuştur (yetkin değil ve sevecen değil). Katılımcılardan ayrıca ev ve iş kadınlarını Kalıpyargı İçerikleri Ölçeği üzerinden değerlendirmeleri istenmiş, ayrıca Çelişik Duygulu Cinsiyetçilik Ölçeği ile Cinsiyet Sistemini Meşrulaştırma Motivasyonu ölçeğini doldurmaları istenmiştir.

Katılımcıların tepki süreleri ve d prime skorları incelendiğinde, genel olarak karışık içerikli kalıpyargıların belirginleşmediği görüldü. Katılımcıların örtük ölçüm performansını yönlendiren, onların iş kadınlarını kayırma ve ev kadınlarını kötüleme eğilimiydi. Örtük ve açık ölçümler arasında beklendik yönde korelasyonlar gözlenmedi. Bu durum, iki farklı ölçme tekniğinin iki farklı sürece karşılık gelmesiyle ya da açık ölçümlerde katılımcıların olumsuz tutumlarını gizlemeye

çalışması ile ilgili olabileceğine işaret etti (Brauer ve ark., 2000; Devine ve Sharp, 2009; Fazio ve Olson, 2003).

Açık ölçümlerde ise karışık içerikli kalıpyargıların açıkça görüldüğü bulundu. Katılımcılar, ev kadınlarını sevecen, iş kadınlarını ise yetkin olarak değerlendirdiler. Sonuç olarak, ilk çalışmanın bulguları Wade ve Brewer (2006) ile paralel bir yöndeydi ve uyaranların karşılaştırılmalı olarak sunulmadığı bağlamda örtük kalıpyargı içeriklerinin gözlenmediğine işaret etti.

Çalışma 2

Elli dokuz kadın öğrenci ile yürütülen Çalışma 2'de tez çalışmasının ikinci sorusuna yanıt aramak amaçlandı. Birinci çalışmadan farklı olarak katılımcıların Tek Kategori GNAT görevini tamamlamaları istendi. Tek Kategori GNAT'ta hedef gruplar ve hedef özellikler karşılaştırmalı bir bağlamda sunuldu.

Çalışmanın sonuçları Carlsson ve Björklund (2010) ve White ve Gardner (2009) ile aynı yöndeydi. Hedef gruplar ve özellikler karşılaştırmalı olarak sunulduğunda karışık içerikli kalıpyargıların örtük düzeyde ayrıştıkları gözlendi. Ancak, örtük ve açık ölçümler arasında beklenilen korelasyonlar gözlenmedi. Bu durum, katılımcıların ev ve iş kadınlarına yönelik örtük tutumlarını açık ölçümlere yansıtmadıkları şeklinde yorumlandı.

Çalışma 3

Elli yedi kadın öğrencinin katıldığı üçüncü çalışmada ölçüm bağlamı etkisini derinlemesine incelemek için katılımcılardan karşılaştırmalı bağlamı içeren (Tek Kategori GNAT) ve içermeyen (Genel Kategori GNAT) iki GNAT görevini tamamlamaları istendi.

Katılımcıların tepki süreleri incelendiğinde karışık içerikli kalıpyargıların ancak Tek Kategori GNAT'ta gözlendiği bulundu. Bununla birlikte, d prime skorları Genel Kategori GNAT'ta ev kadınları için karışık içerikli kalıpyargıların gözlendiği, ancak iş kadınlarının yetkinlik boyutunda ev kadınlarından farklılaştırılmadığı bulundu.

Aktivasyon-Uygulama düzeyleri arasındaki ayrımı incelemek için yürütülen açımlayıcı faktör analizi iki tür GNAT oturumundaki performansın iki farklı faktörde yüklendiğini gösterdi. Böylece, Brauer ve ark.'nın (2000) ayrımının yapı geçerliliğine yönelik destek sağlandı. Ancak, örtük ve açık ölçümlerin uygulama düzeyinde anlamlı korelasyonlar göstermemesi söz konusu ayrımın yordayıcı geçerliliği konusunda destek sağlamadı.

Çalışma 4

Yüz on üç kadın ve erkek katılımcı ile yürütülen dördüncü çalışmada sunulan tezin üçüncü sorusuna yanıt arandı. Böylece, hedef özelliklerin karşılaştırılmalı olarak sunulmadığı Tek Kategori GNAT oturumlarında ev ve iş kadınlarına yönelik örtük kalıpyargılar incelendi.

Çalışmanın sonuçları genel olarak kalıpyargı içeriklerinin pozitif boyutta gözlendiklerine işaret etti. Bununla birlikte, White ve Gardner'dan (2009) farklı olarak ev kadınlarının yetkin olmama ve iş kadınlarının da sevecen olmama ile ilişkilendirildikleri gözlendi.

GNAT çalışmalarının sonuçları genel olarak ölçüm bağlamının örtük kalıpyargı içerikleri üzerinde önemli bir etkisi olduğuna işaret etti. Bu açıdan, KİM'de önerilen karışık içerikli kalıpyargıların uygulama düzeyinde ölçüm yaptığı belirtilen görevlerde gözlendiği sonucuna varıldı.

Karışık İçerikli Kalıpyargıların Motivasyonel Kökenleri

Karşılaştırmalı bağlamın karışık içerikli kalıpyargılar üzerindeki etkisine yönelik açık ölçüm düzeyinde de bulgular bulunmaktadır (Aktan ve Güvenç, 2008; Judd ve ark., 2005; Oldmeadow ve Fiske, 2007). Yapay gruplarla yapılan çalışmalarda yetkinlik (sevecenlik) açısından farklılaştırılan gruplar karşılaştırmalı olarak sunulduğunda düşük yetkinlikteki gruba katılımcıların sevecenlik (yetkinlik) atfederek telafi etme eğilimi gösterdiği belirtilmektedir (Judd ve ark., 2005). Gerçek gruplarla yapılan çalışmalarda ise gözlenen sıra etkisi bireylerin sevecenlik değerlendirmesini kullanarak yetkin olarak görülmeyen grubun bu durumunu telafi etmeye çalıştıklarına işaret etmektedir (Aktan ve Güvenç, 2008; Oldmeadow ve Fiske, 2007).

Telafi etme eğiliminin temelinde sistemi meşrulaştırma motivasyonunun yattığı belirtilmektedir (Jost ve ark., 2005). Karışık içerikli inançlar üzerinde yapılan çalışmalar, bu gibi inançların var olan sosyal sistemin daha meşru olarak görülmesi ile ilişkili olduğuna işaret etmektedir (Kay ve Jost, 2003). Bu doğrultuda, Jost ve Kay (2005) koruyucu cinsiyetçiliğin sistemi meşrulaştırma motivasyonunu arttıran bir etkisi olduğunu göstermiştir.

Karışık içerikli kalıpyargıların sistemi meşrulaştırıcı şekilde kullanılması ile ilgili çalışmalar ise oldukça azdır. Bu açıdan, bireylerin aktif bir şekilde telafi etme eğilimiyle karışık içerikli kalıpyargıları nasıl kullandıkları sorusu yanıtsız kalmaktadır. Tez çalışmasının ikinci bölümünde bu konu ele alınarak aşağıdaki sorulara yanıt aranmıştır:

> S4: Bireyler, kendilerine sunulan grupları karşılaştırma eğiliminde midir?

S5: Bireyler, düşük statülü grupların yetkinlik boyutundaki olumsuz durumlarını onlara sevecenlik atfederek telafi etme eğiliminde midir?

S6: Sistemi meşrulaştırıcı inançlar telafi etme eğilimi üzerinde bir role sahip midir?

Çalışma 5

İkiyüz elli dokuz öğrencinin katıldığı beşinci çalışmada ev ve iş kadını gruplarının sunum sırası değişimlenerek karşılaştırma ve telafi etme eğilimleri incelenmiştir. Sunum sırası değişimlenerek katılımcıların kendilerine sunulacak olan ikinci grubu bilmemeleri sağlanmıştır. Böylece tez çalışmasının son üç sorusuna yanıt aranmıştır.

Çalışmanın sonuçları ev ve iş kadınlarına yönelik karışık içerikli kalıpyargıların katılımcıların değerlendirmelerinde gözlendiğine işaret etti. Bununla birlikte, ev ve iş kadınlarına yönelik değerlendirmeler incelendiğinde, katılımcıların ikinci sırada sunulan ev kadınlarına yönelik hem yetkinlik hem de sevecenlik değerlendirmelerini arttırdıkları gözlenmiştir. Buna karşın, ev kadınından sonra sunulan iş kadınına yönelik yetkinlik değerlendirmelerinin değişmediği ancak ikinci sıradaki iş kadının sevecenliğinin azaltıldığı gözlenmiştir. Bu bulgular katılımcıların bir karşılaştırma ve telafi etme eğilimi gösterdiklerine işaret etmiştir.

Telafi etme etkisi ve cinsiyet sistemini meşrulaştırıcı inançlar arasındaki ilişkiyi incelemek için bir dizi regresyon analizi yapılmıştır. Bu analizlerde, katılımcıların ilk gruba yönelik değerlendirmeleri yordayıcı değişken, düşmanca ve koruyucu cinsiyetçilik düzeyleri moderatör değişken, ve katılımcıların ikinci sıradaki gruba yönelik değerlendirmeleri ise çıktı değişkeni olarak alınmıştır. Regresyon analizleri genel olarak kadınlara yönelik olumlu tutumların (düşmanca cinsiyetçiliğin düşük olması ve koruyucu cinsiyetçiliğin yüksek olması) ikinci sıradaki değerlendirmeleri arttırma ile ilişkili olduğunu gösterdi. Önemli bir bulgu ise ilk sırada iş kadınlarına

yönelik yapılan yetkinlik değerlendirmesinin ikinci sırada sunulan ev kadınına yönelik sevecenlik değerlendirmesini yordaması ve bu ilişkiyi koruyucu cinsiyetçiğin modare etmesiydi. Söz konusu bulgu, koruyucu cinsiyetçilik gibi sistem meşrulaştırıcı inançlara/ideolojilere sahip olan bireylerin düşük yetkinliği olan gruplara yüksek sevecenlik atfederek telafi etme eğiliminde olduklarına işaret etti.

Çalışma 6

Yüz atmış altı katılımcının katıldığı Çalışma 6'da sıra etkisinin katılımcıların karşılaştırma eğiliminin sınırlanmasından kaynaklandığını göstermek amaçlanmıştır. Bu amaçla, beşinci çalışmadaki yöntem takip edilmiş, ancak katılımcılara değerlendirecekleri iki grup çalışmaya başlamadan önce belirtilmiştir.

Çalışmanın sonuçları katılımcılar başlangıçta bilgilendirildiklerinde sıra etkisinin kaybolduğuna ve yine karışık içerikli kalıpyargıların gözlendiğine işaret etti. Regresyon analizleri ile katılımcıların değerlendirmeleri arasındaki ilişkiler incelendiğinde ise iş kadınının yetkiliği ile ev kadınının sevecenliği arasındaki telafi edici ilişkinin yeniden gözlendiği, ancak bu ilişkiyi koruyucu cinsiyetçiliğin modare etmediği bulundu.

Çalışmaların Başlıca Katkıları ve Sınırlılıkları

Sunulan tez çalışmasında karışık içerikli kalıpyargıların altında yatan bilişsel ve motivasyonel süreçleri incelemek amaçlanmıştır. Bu amaçla yürütülen ilk dört çalışmada karşılaştırmalı ölçüm bağlamının kalıpyargı içerikleri ile ilgili olduğu gösterildi. Böylece, örtük kalıpyargı içeriklerine yönelik olarak literatürdeki tutarsız bulgulara bir açıklama sağlandı. Son iki çalışmada ise karşılaştırma ve telafi etme eğilimi ilişkilendirildi. Bu çalışmalarda sistem meşrulaştırıcı inançlara sahip bireylerin aktif bir şekilde düşük statüdeki grupların yetkinlik açısından olumsuz olan durumlarını onlara sevecenlik atfederek telafi etme eğiliminde oldukları bulundu.

Örtük kalıpyargı içeriklerini incelemek için yürütülen GNAT çalışmalarında aktivasyon-uygulama ayrımının yordayıcı geçerliliğine yönelik bulgular elde edilemedi. Bu durumun olası bir sebebi kalıpyargı içeriği ölçeklerinin amacının katılımcılar tarafından kolayca tahmin edilebiliyor olmasıydı. Bu nedenle, gelecek çalışmalarda söz konusu ayrımın yordayıcı geçerliliğinin incelenmesi için örtük ve açık ölçümler arasındaki korelasyondan daha iyi bir kriter belirlenmesi gerekebilir. Ayrıca, GNAT esasında uygulama düzeyinde kalıpyargı içeriklerini ölçmeyi amaçladığı için söz konusu ayrıma yönelik iddianın aktivasyon düzeyinde ölçüm yapan Ard Arda Ateşleme Görevinde (Sequential Priming Task) ölçüm bağlamının değişimlenmesi ile test edilmesi önerilebilir.

Telafi etme eğiliminin incelendiği beşinci ve altınca çalışmalarda ortaya çıkan önemli bir sınırlılık, katılımcıların yetkinlik ve sevecenlik değerlendirmelerinin yüksek düzeyde olumlu bir korelasyon göstermesiydi. Söz konusu durum, yetkinlik ve sevecenlik arasında beklenebilecek negatif yöndeki telafi edici etkinin gözlenmesini engellemiş olabilir. İki alt ölçek arasındaki korelasyonların yüksek olması bu ölçeklerin birlikte sunulması ve negatif madde içermemesinden kaynaklanıyor olabilir. Gelecek çalışmalarda iki alt ölçeğin ayrı ayrı verilmesi ve negatif ölçek maddelerinin eklenmesi, yetkinlik ve sevecenlik arasında beklenen negatif korelasyonun gözlenmesini sağlayabilir.

Genel olarak bakıldığında çalışmanın sonuçları, yetkinlik ve sevecenliğin bir bilişsel yapıdan ziyade birer değerlendirme boyutu olduğu görüşü ile paralel yönde olduğu görülmektedir. Katılımcıların örtük ve açık kalıpyargı içerikleri ölçüm bağlamına bağlı olarak bu boyutlar üzerinde kurgulanıyor gibi gözükmektedir.