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Master Thesis

Communication Styles at Work
Influencing Factors on Self- and
Other-Concerned Communication Style

Deposed by

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INTRODUCTION

Communication is the most essential as well as the most elusive element of any organization, since the basis of every task and every process is constituted by communication. But due to it's complex nature and omnipresence, it seems almost impossible to draw clear lines between different communicative acts (Thomas, 1976). Considering organizational communication processes, it becomes apparent that internal communication, defined as "all formal and informal communication taking place internally and at all levels of an organization" (Kalla, 2005, p. 304), seems to be of particular interest, since it is crucial for the maintenance of seamless organizational functioning and the connection of members within an organization in order to organize daily business and tasks (Argenti, 2003; Bovée & Thill, 2000; Kalla, 2005; Welch & Jackson, 2007). Thus, internal organizational communication is considered as "a precursor for organizational existence" and moreover, authors point out that effective internal communication is a main contributor to success (Kitchen & Daly, 2002, p. 47; Welch & Jackson, 2007). It not only enhances important bottom line outcomes such as increased productivity and profitability but also helps organizations to deal more easily with economic challenges and changes (Melcrum, 2014; Towers Watson, 2010).

However, interpersonal communication as a basic element and determinant of internal organizational communication seems neglected and the real importance of interpersonal communication within organizations is underestimated (Kitchen & Daly, 2002; Mishra, Boynton & Mishra, 2014; Smidts, Pruyn & Riel, 2001). A large potential for conflict due to communication problems, misunderstandings and different expectations arises from the fact that organizations consist of different people communicating differently, presenting a major challenge for workplace interactions (McCallister, 1992). Though several studies examined interpersonal communication in terms of content and transmitted messages (Giri, 2004; Keyton et al., 2013), only a few authors focused on the way employees communicate within an organization regarding a specific communication style and the factors by which this communication style is determined (Kalla, 2005; McCallister, 1992; Thomas, Zolin & Hartman, 2009). Since present research is lacking in that point, it is the objective of this thesis to offer a better understanding of interpersonal communication processes within organizations by outlining existing communication styles and their determining factors.

Communication style is the way individuals are communicating with each other and is closely related to their behavior during a communicative interaction (Norton, 1977). Although there are a lot of different communication styles, scholars from different disciplines found an underlying two-dimensional structure among which those style components are classified (Blake & Mouton, 1964; Thomas & Kilmann, 1974; Pruitt & Carnevale, 1993). The first dimension is concern for self, describing the extent to which a person tries to satisfy his or her own needs and to meet his or her own objectives, while the second dimension is concern for others, referring to the extent a person is concerned with the welfare of others and tries to meet their needs and objectives (Meglino & Korsgaard, 2004; Rahim, 1983). Consequently, I assume that the communication style differs depending on whether a person is rather self- or other-concerned.

However, little is known about factors influencing a self- or other-oriented communication style at the workplace. In the literature, there are two main streams of research examining the influencing factors on interpersonal communication style. First, it is supposed that individuals adapt their behavior to the environmental setting they are surrounded by during the moment of the interpersonal interaction (Morris et al. 1998). For the present study this is reflected by the organizational context, supported by the fact that an organization is perceived as a system of shared beliefs orienting the behavior and communication processes of its members (Schein, 2004). The organizational culture is further seized as a visible and transmitting element of this common sense, as individuals will differ in their way of behaving and communicating according to the particular culture of their organization (Schnöring, 2007). Second, individual predispositions rooted within the individual itself are also affecting individual communication style. In a modern workforce where biological sex differences are diminishing, the concept of gender-role identity of masculinity and femininity is perceived as an important contributing determinant for an individual's personality, also shaping communication styles (Giri, 2006; House, Dallinger & Kilgallen, 1998). Although scholars claim that individual predispositions are even more powerful determinants of communication style than environmental settings, detailed research in that field is lacking and finally leads to the following research question:

What are the relative impacts of the organizational factor and the individual factor on personal communication style at work in terms of self- and other-orientation?

Answering this question is important, because it raises the awareness of the existence of different communication styles and provides seminal insights for managers into organizational communication processes. The anticipation of different communication style might contribute to the resolution of communication conflicts, because in general "people do not react to what you say; instead, they react to how you say what you say" (McCallister, 1992, p.X). Hence, the clash of communication styles is undoubtedly a source of numerous communication problems and a better understanding of dynamics between employees results in less conflicting and more effective communication. Knowing the source where those different communication styles stem from is interesting for the establishment of internal communication policies to actively reduce those conflicts and to enhance efficiency. When the organizational factor is of a stronger impact, then managers have to check, whether their company culture implies a certain style of communication and whether this style corresponds to the company's objectives. When the individual factor is of greater influence, managers might during the recruiting process select employees providing a good fit to internal communication habits. The implementation of specific communication policies may be useful in achieving coherency and consistency between corporate external image, organizational culture and employee communication to enhance overall success.

In the first part of this thesis, the theoretical foundation for the chosen two-dimensional construct of communication style based on theories of concern for self and concern for others is provided. Potential influencing factors on communication style derived from previous and actual research are presented. Hypotheses are grounded in the link between antecedent construct dimensions (i.e. the four culture types as well as masculine and feminine gender-role identity) and the communication style dimensions (i.e. concern for self and for others) resulting in the conceptualization of the structural equation model. The analysis method of this model as well as the scale operationalization of the different constructs are explained in the methodology section. Following, overall results regarding hypotheses support or rejection and the alternation of the initial model in order to achieve a better integrated model are demonstrated. The last section finally discusses the results obtained from the hypothesis testing and the implications of the final model. Alternative attempts of explanation resulting from the new model are described and justified, showing the value of those findings for researchers as well as company managers.

LITERATURE REVIEW

Conceptualizing Communication Style

Interpersonal Communication

Interpersonal communication is commonly defined as dyadic interaction between at least two human actors who exchange verbal and non verbal messages and thereby mutually create meaning (Beebe, Beebe & Redmond, 2002; Burleson, 2010; Guerrero, Andersen & Afifi, 2007; Trenholm & Jenson, 2004). In that sense, the scholars of Palo Alto draw attention on the fact that communicative acts are generally composed of a content aspect and a relationship aspect and the necessity that all interlocutors have to understand and interpret the content as well as the established relation in order to achieve the aim of "mutually creating meaning" (Watzlawick, Beavin & Jackson, 1972). While the content level refers to what is communicated and therefore a particular message is relatively easy to capture, the relationship level requires some extended interpretation efforts, providing information on how that message should be understood (Watzlawick, Beavin & Jackson, 1972). In other words, any communicative interaction is always determined by the relational aspect which in turn will provide seminal insights into interpersonal dynamics between different actors. However, interpersonal dynamics do not only rely on communication, the displayed behavior during an interaction needs to be taken in consideration alike, because it is interpreted as having a particular meaning. Consequently, interlocutors adapt their communication and behavior to the other party resulting in a simple action-reaction scheme (Rhoades & Carnevale, 1999). Moreover, McCallister (1992) assumes that an individual not only adapts his or her reaction to the behavior of the counterpart, but that the expected behavior of the other is already influencing.

In summary, interpersonal communication is conceptualized as communicative exchange accomplished by means of behavioral patterns impacting the reaction of the participating communicators. In that context it is important to note that every person communicates and reacts differently during such a communicative interaction. In the literature, this phenomenon is referred to as communication style describing the fact that each individual has his own specific way of communicating. Both, researchers in

the field of interpersonal communication as well as in behavioral communication are closely intertwined in the tendency to suggest that communication style is a central element giving important insights into interpersonal dynamics of any communicative interaction (Ivanov & Werner, 2010; Norton, 1978; Wofford, Gerloff & Cummins, 1977).

Communication Style

According to Wofford, Gerloff and Cummins (1977) communication style is defined as a "specialized set of interpersonal behaviors with related purposes and similar approaches used consistently by a person in similar situations" (Wofford, Gerloff & Cummins, 1977). While this definition seems to be derived from the behavioral aspect of communication, Norton focuses more on the relational aspect of interpersonal communication in claiming that "communication style is broadly conceived to mean the way one verbally and paraverbally interacts to signal how literal meaning should be taken, interpreted, filtered or understood" (Norton, 1978, p. 99). Nevertheless, he agrees with Wofford, Gerloff and Cummins (1977) in the point that communication style underlies the influence of a specific context and a specific situation (Norton, 1978).

Based on his review of interpersonal theory focusing on communication behavior, Norton (1978) established a communicator style construct. The most important finding I apply for my thesis is an underlying dimensionality of communication style providing information on how people communicate and which style components differentiate them in their communication. Thus, Norton's (1978) results reveal attentive and friendly style components at the one end of the dimension and dominant and contentious style components at the other end. Those style components are translated into a continuum ranging from nondirective communication activity embracing the attentive communicator who encourages, accommodates, and acknowledges others to directive communication activity involving the dominant communicator who talks frequently and takes control in social situations. A similar approach is given by Richmond and McCroskey (1990) who developed the Assertiveness-Responsiveness Measure. Assertiveness reflects a person's willingness to speak up for her- or himself taking control, and influencing others in interaction, while responsiveness involves being other-oriented, considering others' feelings, and listening to what others say.

Concern for Self and Others displayed in Communicative Interactions

Akin, management scholars found in earlier research a similar underlying dimensional structure in assessing interpersonal communication in organizational settings from an entrepreneurial perspective in terms of conflict handling and negotiation strategies (Blake & Mouton, 1964; Hall, 1969; Thomas & Kilmann, 1974; Renwick, 1975; Thomas, 1976; Pruitt, 1983; Rahim, 1983). According to their findings, individuals show during communicative interactions either concern for self or concern for others, resulting in the establishment of the "Dual Concern Model" (Thomas & Kilmann, 1974; Renwick, 1975; Thomas, 1976; Pruitt, 1983; Rahim, 1983; Pruitt & Carnevale, 1993). Those concern constructs are derived from the concept of social interest focusing on behavioral incidents from a psychological perspective (Flangan, 1954; Adler & Ansbacher, 1968; Crandall, 1975). In later research, authors also conceptualized it as "self-interest/concern" vs. "other-orientation" (Meglino & Korsgaard, 2004; De Dreu & Nauta, 2009), "assertiveness" vs. "cooperativeness" (Thomas, 1976) or "concern for own outcomes" vs. "concern for other's outcomes" (Pruitt, 1983), respectively.

However, in contrast to Norton (1978) and McCroskey and Richmond (1990) who conceptualize communication style on a continuum, the common point of researchers in organizational studies is the conceptualization of the dual concern as two-dimensional construct (Blake & Mouton, 1964; Rahim, 1983; Renwick, 1975; Thomas, 1976). The fact that concern for self and concern for others are displayed among two independent, orthogonal scales implies that individuals can be high or low on both dimensions (Pruitt & Rubin, 1986; Pruitt & Carnevale, 1993; Rhoades & Carnevale, 1999; De Dreu & Nauta, 2009). Self-concern is defined as explaining "the degree to which a person attempts to satisfy his or her own needs" and is according to Miller (1999) a powerful determinant of behavior (Rahim, 2002, p.216). The literature further suggest that individuals commonly tend to maximize their self-interest for their own purpose (Miller, 1999; Meglino & Korsgaard, 2004). Akin, Meglino & Korsgaard (2004) define self-interest as "thinking and acting in a manner that is expected to lead to an optimal or maximum result for a person" (p. 946). The concept of self-concern recently gained interest in organizational research as having a positive influence on job autonomy and performance (De Dreu & Nauta, 2009). On the contrary, concern for others is defined as explaining "the degree to which a person attempts to satisfy the

needs of other people" (Rahim, 2002, p.217). In other words, other-oriented individuals focus more on the outcomes and goals of others than on own outcomes (Meglino & Korsgaard, 2007). The construct of other-orientation is derived from the theory of altruism in the sense that decisions not necessarily reflect own interests, but serve the welfare of others (Meglino & Korsgaard, 2007). Recent studies use other-orientation in research on organizational citizenship behavior and a form of prosocial behavior displayed by individuals in a workplace setting (De Dreu & Nauta, 2009).

The "Dual Concern Model" as initial predicting model of conflict styles and negotiation strategies has been critically discussed among researchers under various aspects (Rahim, 1983; Thomas, 1988; Van de Vliert & Kabanoff, 1990; Sorenson, Morse & Savage, 1999; Rohades & Carnevale, 1999). Rhoades and Carnevale (1999) found in their study only support for the model under the condition that the opponent's behavior was identical to the negotiator's own motivationally prescribed behavior. Thus, "without a clear and consistent strategy […] the dual concern model's motivational predictions cannot be supported" (Rohades & Carnevale, 1999, p. 1797). In that point, their research provides an important contribution to the empirical testing of the model, as they examined different behavioral contexts of the chosen conflict-handling-strategy. However, the studies only measure the concern for self and others as well as the chosen conflict style on the basis of a predefined scenario and therefore, no conclusion can be drawn in reference to individual characteristics, that means if prospects are naturally rather self-concerned or other-concerned. Hence, further research is necessary to assess, in which way individuals show those behavioral patterns in more or less natural environmental settings independent of predetermined observations. Another critical point of the model is stressed by Thomas (1988) who criticizes the the two-dimensionality as too simplified and lacking in ability to assess the complexity of the construct. Akin, Wall & Roberts Callister (1995) raise the same question in claiming that a two-dimensional instrument may generate two-dimensional thinking and neglect other possible outcomes.

The Antecedents of Self- and Other-Concerned Communication Style

There is not yet sufficient empirical research establishing a direct link between the dual concern dimensions and communication style. In the literature it is merely assumed that the underlying dimensions of concern for self and concern for others provide a general picture of an individual's communicative orientation (Wall & Roberts Callister, 1995). Given the fact that concern for self and concern for others is reflected by specific behavioral patterns, it leads me to the assumption that those two dimensions are displayed in an individual's communication style as well. Whether a person shows a rather self-concerned or other-concerned communication style seems according to the literature to depend on two main factors: a context-level factor and an individual level factor (Thomas, 1988; Wall & Roberts Callister, 1995; Rhoades & Carnevale, 1999; Cai & Fink, 2002; De Dreu & Nauta, 2009). Those two factors have been examined upon various concepts. The context-level factor is accounted for culture, environmental context or a specific situation (Morris et al., 1998; Giri, 2004). Part of that context might also be with whom someone is communicating and consequently that person adapts the communication to his or her counterpart (Kikoski, 1999). Based on previous research of the "Dual Concern Model" individuals choose a communication style which in their estimation seems to be the most appropriate in a given context (Pruitt & Rubin, 1986; Rhoades & Carnevale, 1999). As the purpose of the present study is to examine workplace communication, the organizational environment will be conceptualized as context-level factor as management scholars stress the impact of the workplace setting on an individual's behavior (Sanchez-Burks et al., 2003; De Dreu & Nauta, 2009). However, other authors point out the importance of individual attributes as valid predictors of a certain communication style (Gudykunst et al., 1996; McCroskey, Heisel & Richmond, 2001; Cai & Fink, 2002). The individual-level factors are conceptualized as variations between individuals like sex, personality or self-construals (Markus & Kitayama, 1991; Calhoun & Smith, 1999; Oetzel & Ting-Toomey, 2003).

Consequently, I posit that organizational and individual factors affect a person's orientation towards one or other communication style based on concern for self and concern for others. Nevertheless, little is know about the real effect both constructs have in the determination of a specific communication style and whether one factor is of a greater impact than the other. Hence, I suggest the following research question:

What are the relative impacts of the organizational factor and the individual factor on personal communication style at work in terms of self- and other-orientation?

Influence of Organizational Factors on Communication Style

Scholars in psychology state that "human behavior takes place in a diverse array of geophysical, psychological, and social contexts" shaping behavioral patterns (Ashford & LeCroy, 2010, p.8). With regard to the social context it is generally argued that individuals tend to adjust their behavior in order to respond appropriately to a specific situation or a given environmental setting for the purpose of meeting social expectations (Watzlawick, Beavin & Jackson, 1972; Schulz von Thun, 2001; Ashford & LeCroy, 2010). In other words, the context in which the human interaction takes place influences an individual's behavior. In the literature this phenomenon is referred to as adaptation or adaptive behavior (Ashford & LeCroy, 2010; Lazarus, 1991). As already pointed out in the previous chapter, behavior and communication are intertwined. Consequently, I suppose that individuals adapt their way of communicating to a specific context alike. Thus, when studying communication style at workplace, the contextual framework the organization provides inevitably has to be taken into consideration as an influential factor. Evidence for this is already given by a considerable number of management scholars who state that the environmental setting of an organization impacts the behavior of its members and consequently their interaction with each other, which is commonly referred to as the field of organizational behavior (French, Rayner, Rees & Rumbles, 2011; Myers, Seibold & Park, 2011). The conceptualization of organizations as systems of shared beliefs complies with the requirements defining such a particular environmental setting capable of influencing the behavior of its members and hence determining their interaction and communication processes (Lawrence & Lorsch, 1967; Goldhaber, 1993; Krone, Jablin & Putnam, 1987; Weick, 1987). This implies that individuals adapt their communication style in order to comply with the common sense of their organization.

In recent research, Gelfand, Leslie & Keller (2008) developed an integrative framework of conflict cultures originating from organizational factors as leadership and structure or individual factors like personality and demographics. Their typology of conflict

culture is based on two dimensions representing a continuum from a passive to an active manner of handling conflict as well as a continuum pointing from an agreeable respectively cooperative to a disagreeable respectively competitive manner of handling conflict (Gelfand, Leslie & Keller, 2008). Interestingly, the second dimension of cooperativeness and competitiveness reflects the same dimensions underlying the dual concern model as established in the previous chapter:

> "Agreeable norms prescribe behavior that promotes group and organizational interests and reflects a collective attempt to move toward others when managing conflicts. Disagreeable norms prescribe behavior that promotes self-interest and reflects collective attempts to move against others when managing conflicts" (Gelfand, Leslie & Keller, 2008, p.141).

The authors conclude that conflict cultures emerge in accordance with the overarching values of an organization and that conflict cultures seem to be "intricately linked to the organizational context" (Gelfand, Leslie & Keller, 2008, p.159). Akin, other recent studies draw on the concept of self-orientation and other-orientation in the field of organizational behavior and further assume that those dimensions, also in terms of communication style, are influenced by the organizational environment (Meglino & Korsgaard, 2004; Meglino & Korsgaard, 2007; De Dreu & Nauta, 2009).

Throughout the literature, authors largely stress on organizational culture as the essential element in transmitting shared beliefs and attitudes and likewise the most influencing factor on organizational communication (Brown & Starkey, 1994; Goldhaber, 1993; Myers, Seibold & Park, 2011; Shockley-Zalabak & Morley, 1994; Smircich, 1983; Smircich & Calás, 1976; Weick, 1976). It is perceived as a visible reference frame among which the members of an organization can orient their behavior (Baker, 1980; Schnöring, 2007; Oetzel & Ting-Toomey, 2011). For this reason, it is assumed that organizational culture clearly affects interpersonal communication and evokes a communication style that fits into the environmental setting inside and outside that organization.

Organizational Culture

According to Bakers (1980) definition, organizational culture is "some interrelated set of beliefs, shared by most of their members, about how people should behave at work and what tasks and goals are important" (p. 51). Other scholars go even beyond the existence of a simple reference frame in introducing a more precise concept of organizational culture to the literature, defined as "the pattern of shared values and beliefs, that help individuals understand organizational functioning and thus provide them with the norms for behavior in the organization (Deshpandé & Webster, 1989, p. 4) as well as

> "a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems" (Schein, 2004, p. 17).

In general, three main perspectives emerge from the literature, first, the integrative perspective, focusing on shared values and basic assumptions, second, the differentiation perspective stressing diversity and the existence of subcultures and third the fragmentation perspective claiming that culture is a permanently adapting and changing phenomena (French, Rayer, Rees & Rumbles, 2011). Despite different approaches and conceptualizations in terms of key attributes determining the organizational culture, authors agree on the strong impact that organizational culture exerts on the internal as well as the external environment of a company in terms of organizational behavior, corporate identity, performance etc. (Schall, 1983; Cameron & Freeman, 1991; Deshpandé, Farley & Webster, 1993; Shockley-Zalabak & Morley, 1994; Brown & Starkey, 2000).

As the concepts of organizational culture are very broad and complex, Quinn and Cameron (2006) found evidence in establishing a framework to appropriately assess the cultural orientation of an organization. Accordingly, they used a former model focusing on key attributes determining a specific culture while being aware of the fact that it is impossible to develop a comprehensive framework including all relevant factors identified in previous research (Quinn & Cameron, 2006). Initially, the model was drafted to identify indicators and key factors of organizational effectiveness

according to Campbell (1977). As a result, two major dimensions emerged clustering organizational culture into four culture types (Cameron & Quinn, 2006). First, the horizontal dimension refers to the organizational focus pointing from a continuum of person-oriented emphasis to a rather organization-oriented emphasis. In other words, the political orientation of the organization can be directed towards its employees and integrating activities or towards competitors and differentiating activities (Quinn & Rohrbaugh, 1981; Quinn & Cameron, 2006). Second, the vertical dimension reflects the preferred structure of the organization ranging from organic to mechanistic processes. While the first focuses on flexibility, spontaneity and dynamism the latter puts the emphasis on control, order and stability (Quinn & Rohrbaugh, 1981; Quinn & Cameron, 2006).

The outcome of those two dimensions are four different quadrants, each describing a particular core value of an organization (Quinn & Rohrbaugh, 1981). They differ among four sets of attributes: dominant characteristics, leadership style, the bases of bonding and strategic emphasis. As the model is established among two dimensions, the underlying core values of each quadrant are assumed to be opposite or competing. For this reason, the model is named in Competing Values Framework and the quadrants were labeled into the culture types *Clan*, *Adhocracy*, *Market* and *Hierarchy* (Quinn & Rohrbaugh, 1981; Quinn & Cameron, 2006).

Figure 1: Organizational Culture Types (adapted from Deshpandé, Farley & Webster, 1993)

Type: Clan

DOMINANT ATTRIBUTES: Cohesiveness, participation, sense of family
LEADER STYLE: Mentor, facilitator, parent-figure
BONDING: Loyalty, tradition, interpersonal cohesion
STRATEGIC EMPHASES: Toward developing human resources, commitment, morale

Type: Adhocracy

DOMINANT ATTRIBUTES: Entrepreneurship, creativity, adaptability
LEADER STYLE: Entrepreneur, innovator, risk taker
BONDING: Entrepreneurship, flexibility, risk
STRATEGIC EMPHASES: Toward innovation, growth, new resources

Type: Hierarchy

DOMINANT ATTRIBUTES: Order, rules and regulations, uniformity
LEADER STYLE: Coordinator, administrator
BONDING: Rules, policies, and procedures
STRATEGIC EMPHASES: Toward stability, predictability, smooth operations

Type: Market

DOMINANT ATTRIBUTES: Competitiveness, goal achievement
LEADER STYLE: Decisive, achievement-oriented
BONDING: Goal orientation, production, competition
STRATEGIC EMPHASES: toward competitive advantage and market superiority

The theory states that each culture type implies particular norms, values and behaviors, reflected by the members of an organization. The purpose for the next sections is, to link the characteristics of each culture type to communication style characteristics in terms of self- and other-orientation permitting to draw a potential relation and influence between similar characteristics, leading to the first set of hypotheses.

The market culture manifests itself through an orientation towards mechanistic processes and external positioning. The main purposes are to attain market superiority and strive for competitive advantages over competitors (Quinn & Rohrbaugh, 1981; Cameron & Freeman, 1991; Deshpandé, Farley & Webster, 1993). Accordingly, the leaders of this organization are willing to take decisions and are outcome-oriented. The members are characterized by a common sense of goal orientation, production and competition. In that culture, limits and goals seem to be quite high and rigid which are considered as self-concern producing variables (Pruitt & Carnevale, 1993):

H1a: Members of a market culture show a self-concerned communication style.

The hierarchy culture also stresses mechanistic processes, but has an orientation towards the internal position of the organization The organizational functioning is assured by principles and regulations as well as uniform and efficient operations, supported by coordinating and organizing leaders. The commitment of the employees is ensured through rules, policies and procedures. Furthermore, they get clear instructions of what is expected from them. Those characteristics are reflected by the strategic emphasis which is oriented towards stability, predictability and smooth running operations (Quinn & Rohrbaugh, 1981; Cameron & Freeman, 1991, p. 26; Deshpandé, Farley & Webster, 1993). Pruitt and Carnevale (1993) suggest that principle governed environments in their capacity to set limits and goals foster concern for self:

H1b: Members of a hierarchy culture show a self-concerned communication style

The clan culture is perceived as completely opposite to the market culture with an orientation towards internal maintenance and organic processes. The strategic

emphasis is placed towards developing human resources, commitment and morale (Quinn, 1988; Cameron & Freeman, 1991). Loyalty, tradition and interpersonal cohesion hold that organization together. Thus, the organization is perceived like an extended family and values participation and teamwork. Thus, members within this organization have very good rapports to each other and consequently show an other-oriented behavior which is assumed to be reflected by their communication style:

H1c: Members of a clan culture show an other-concerned communication style.

Finally, the adhocracy culture is in direct contrast to the hierarchy culture. Core values are creativity, adaptability and dynamism supported by entrepreneurial, innovative and risk taking leaders. As a result, the commitment of organizational members is ensured through encouraging entrepreneurial thinking, flexibility and sharing risk (Quinn & Rohrbaugh, 1981; Cameron & Freeman, 1991; Deshpandé, Farley & Webster, 1993). To reach creative and innovative outcomes, a certain degree of cooperation is necessary. Although this culture seems to be a quite competitive environment, the "perception of a common group identity" plays an important role, as members are supposed to push and support each other in order to be creative and innovative (Pruitt & Carnevale, 1993, p. 108). Akin, the risk sharing proofs a sense of community, implying an other-oriented communication style:

H1d: Members of an adhocratic culture show an other-concerned communication style.

Although the Competing Values Framework suggests the classification of organizational culture among those types, scholars generally point out that an organization's identity is not necessarily defined by only one culture, but can be composed of multiple "subcultures that may co-exist in harmony, conflict, or indifference to each other" and hence impact organizational performance (Frost, Moore, Louis, Lundberg & Martin, 1991, p.8; Miller, 1999). Assuming that strong and congruent cultures are more effective and consequently show higher performance, the theory of cultural "fit" or congruence has been introduced as a research topic (Nadler & Tushman, 1980; Deal & Kennedy, 1983; Schein, 1984; Cameron & Freeman, 1991; Ashforth, 1985). Thus, Cameron and Freeman (1991) designated their study to investigate in how far the congruence, strength and type of organizational cultures

impact organizational effectiveness. However, they found no difference between strong and weak as well as between congruent and incongruent cultures in determining the level of effectiveness but rather in relation to the type of culture. The latter finding that the concept of organizational culture appropriately predicts effectiveness outcomes is also supported by Denison and Mishra (1995). Moreover, Deshpandé, Farley and Webster (1993) found that "firms with cultures that are relatively responsive (market) and flexible (adhocracy) outperform more consensual (clan) and internally oriented bureaucratic (hierarchical) cultures" (p. 31). Those and other studies prove the acceptance and validity of the Competing Values Framework to be an adequate instrument in assessing the culture of organizations (Helfrich, Li, Mohr, Meterko & Sales, 2007; Howard, 1998).

Influence of Individual Factors on Communication Style

Individuals differ in their personality, determined by specific characteristic traits. Those are displayed through behavioral patterns and hence shape the way, individuals are interacting and communicating with each other. Consequently, I suppose that with regard to their personality, individuals show a certain style of communication. In a previous chapter the impact of the environmental context on communication style was outlined; personality needs to be taken into consideration as well. Moreover, individual attributes are expected to be an even more powerful determinant for the way a person is communicating within a specific situation (Gudykunst et al., 1996). Thus, I conclude that a person adapts his or her communication to a given context in accordance with her individual-level attributes.

In the literature, personality is conceptualized in various ways. While some authors claim that "the main communication style dimensions are subsumed under more general personality models, such as the Big Five or Five Factor Model" (de Vries, Bakker-Pieper, Konings and Schouten, 2011, p. 509), others rely on alternative constructs like gender-role identity (Giri, 2004; House, Dallinger & Kilgallen, 1998; Kirtley & Weaver, 1999; McCroskey, Heisel & Richmond, 2001). A recent study, for example, examined personality-based communication behavior in workplace setting (Macht & Nembhard, 2015). The findings revealed that communication style mediates

the relationship between personality and team performance. In other words, Macht and Nembhard (2015) demonstrated that differences in communication style result from personality, reinforcing my assumption that communication style is a function of a superordinate personality concept. Aside from research on the personality construct, numerous studies provide evidence that individual factors shape communication traits and communication style (Ejaz, Iqbal & Ara, 2012; de Vries, Bakker-Pieper, Konings & Schouten, 2011; Giri, 2004; House, Dallinger & Kilgallen, 1998; Kirtley & Weaver, 1999; Macht & Nembhard, 2015; McCroskey, Heisl & Richmond, 2001).

Many scholars in the field of management and organizational behavior, however, rely rather on sex differences as accounting for variations in communication behavior (Calhoun & Smith, 1999; Carli, 2006; Kirtley & Weaver, 1999; Shockley-Zalabak, 1981). Although a considerable number of studies provides evidence for that assumed influence, other authors deny any relationship according to their findings (Burleson & Samter, 1992; Hyde & Linn, 1988; Simkins-Bullock & Wildman, 1991). A potential reason for those contradicting results might be explained by different underlying communication concepts and methodological approaches making an adequate operationalization difficult.

Consequently, a controversial discussion emerged among researchers in that field in order to explain obviously existing differences, and alternative explanatory approaches were taken into account. McCallister (1992) as an example argues that socialization accounts for the occurrence of a specific communication style and therefore negates the impact of sex-differences. Derived from previous research, Kirtley and Weaver (1999) furthermore suggest that "gender role self-perception is the key factor underlying our attitudes, beliefs and behaviors when interacting and communicating with each other" (p. 193). Both assumptions have already been merged by other scholars, stating that the perception of gender-role results from the socialization process (Bandura, 1986; Eagly, 1987; Wood & Lenze, 1989). Due to this assumption and the fact that in some studies focusing on biological sex provided no acceptable explanation for inter-individual differences, scholars were seeking alternative explanations.

Gender-Role Identity

The most important alternative approach suggests that not biological, but psychological gender-role identity accounts for varying behavioral patterns among individuals. The term "gender" is largely referred to as the social or psychological sex as the effect of historical, social and cultural processes (Bundesamt für Gesundheit, 2004). It denotes what in a particular society or culture is perceived as typically masculine or typically feminine. Oakley (1985), pioneer of the gender study concept, established the following differentiation between sex and gender:

> 'Sex' is a word that refers to the biological differences between male and female: the visible difference in genitalia, the related difference in procreative function. 'Gender however is a matter of culture it refers to the social classification into masculine and feminine' (Oakley, 1985, p.16).

In that sense, scholars likewise introduce the term of "sex-stereotyping" as the result "of biological and social conditioning" (Giri, 2004, p. 14). Accordingly, each biological sex was associated with specific psychological characteristic properties perceived as typical. Men for example were supposed to be strong, direct, aggressive, dominant and straight to the point – referred to as masculine. In contrast, women were assumed to be gentle, warm, sympathetic and emotional – referred to as feminine (Kirtley & Weaver, 1999). In that context, seminal work was provided by Bem (1974) who denounces the gender concept for sex-role typing and further criticizes the state of research for being too unilateral and points out that "masculinity and femininity have long been conceptualized as bipolar ends of a single continuum" and consequently "a person has had to be either masculine or feminine, but not both" (p. 155). She further notes the potential influence of a situational context and that individuals might adjust their behavior and thus sometimes behave more what is defined as masculine or more feminine (Bem, 1974). In rejecting on the assumption that masculine-typed individuals only display typically "masculine" behavior and that feminine-typed individuals only display "feminine" behavior she introduces the concept of androgyny, describing mixed behavioral patterns of masculinity and femininity, assessed by the Bem Sex-Role Inventory (BSRI) (Bem, 1974). The purpose of her scale is to indicate the endorsement of masculine and feminine attributes whereas the "Androgyny score is the difference between an individual's masculinity and femininity normalized with respect to the standard deviations of his or her masculinity and femininity scores" (Bem, 1974, p.

158). Another new gender label of this scale describes undifferentiated individuals, applicable on persons scoring low both dimensions. Especially in a modern workforce where differences in job attributes regarding biological sex of male and female diminish, the construct of gender-role identity seems more appropriate to measure behavioral patterns.

However, since the introduction of the BSRI four decades have elapsed and Choi, Fuqua & Newman (2008) outline that gender roles have changed since then and therefore revision of the instrument is necessary. Apart from that, the item selection process and the factor structure of Bem's measurement instrument were subject of numerous reassessments (Choi, Fuqua & Newman, 2007; Choi, Fuqua & Newman, 2008; Colley, Mulhern, Maltby & Wood, 2009; Pedhazur & Tetenbaum, 1979). Regarding the items, Pedhazur and Tetenbaum (1979) apprehend that prospects might give themselves a higher rating on personality adjectives considered favorable regardless of the classification into masculine and feminine. For this reason, Choi, Fuqua and Newman (2008) have it made their task to replicate and update the work of Pedhazur and Tetenbaum (1997) with the primary purpose to "examine the relationship between self-ratings and desirability ratings of abstract referents" (p. 884). Indeed, they found a discrepancy between desirability ratings of masculine and feminine attributes tending to be consistently higher than own self-ratings (Choi, Fuqua & Newman, 2008).

Regardless of the critics, the BSRI is still a frequently chosen instrument in order to measure gender-role identity (Birdsall, 1980; Giri, 2004; House, Dallinger & Kilgallen, 1998; Kirtley & Weaver, 1999). Nevertheless, it has to be mentioned that recently a strict differentiation between sex and gender is called into question and that a more and more reciprocal influence of both is assumed. Akin, other influential factors like age, ethnicity, social classes and sexual orientation seem to intervene in this classification (Bundesamt für Gesundeheit, 2004). But as for the moment almost no alternative measurements for this construct exist, I consider the BSRI as an adequate instrument for the present study. Further, Bem's instrument has already been used in the context of communication style and proved to be valid (Birdsall, 1980; Giri, 2004; House, Dallinger & Kilgallen, 1998; Kirtley & Weaver, 1999).

A study of Birdsall (1980) examined potential differences, male and female managers show in leader behavior through their communication style. Her results indicate that both, male and female managers have a "masculine" perception of themselves and as a result no differences in communication style are found. House, Dallinger and Kilgallen (1998) reported differences in communicator style regarding masculine and feminine gender label, although feminine-oriented persons produced no distinct category. Based on the Communicator Style Profile Test of McCallister (1992), they found that Rhetorically Sensitive Communicators fit into the non-differentiated gender role (low on masculine and feminine dimension), masculine-oriented persons constitute the communication style of Noble Selves and finally, Rhetorical Reflectors tend to be androgynous. A more recent study of Giri (2004) further confirmed the assumption, that feminine and masculine persons differ significantly in the way they are communicating. Likewise, the results of House, Dallinger and Kilgallen (1998) are confirmed in so far as masculine gender-role identity predicts the noble communication style, however Giri (2004) disagrees with the fact that reflective communicators are androgynous. According to his results, reflective communication style is predicted by feminine gender identity in contrast to the findings of House, Dallinger and Kilgallen (1998) where feminine gender construct failed any classification of communication style. In a larger extent regarding communication traits, Giri's (2004) findings indicate that masculine individuals "reported a preference for a goal oriented, assertive and dominant communication style" while feminine individuals preferred a "supportive, caring and expressive communication style (Giri, 2004, p. 83-84).

Focusing on similar communication attributes, but on biological sex instead of gender-role, Carli (2006) concludes in her review of previous research, that "women's communications are more other-directed, warm and mitigated than men's, and men's communications are more dominant, status-asserting and task-oriented than women's" (p.76). Accordingly, she directly draws the link between sex and the dual concern dimensions which in Giri's (2004) study only emerge on a quit subliminal level. Calhoun and Smith (1999) also rely on the assumption that women display an other-concerned communication behavior while men are supposed to show a self-concerned communication behavior. However, they obtained discrepant results, assuming that concern for self and for others depends on different situational factors, like sex of the counterpart during the negotiation, extrinsic motivational factors or manipulation of the

variables (Calhoun and Smith, 1999). Nevertheless, in their results there seems to be a general tendency towards a concern for others amongst women and a concern for self amongst men. Further, it has to be mentioned that both studies focus on sex, not gender-role which leads me to the assumption that the literature is lacking research on the influence of gender-role on communication style regarding self- and other-orientation. Due to the fact that all in all present gender-role identity seems to be a more promising approach than biological sex differences, the following hypotheses are suggested:

H2a: Masculine gender-role identity would predict significantly a self-concerned communication style at work.

H2b: Feminine gender-role identity would predict significantly an other-concerned communication style at work.

Conceptualizing the Hypotheses Model

Summing up the previous chapters provides an important contribution to conceptualize the hypotheses model which in the methodology section is translated into the testing model.

Communication style is described as the way, people are communicating with each other, based on behavioral patterns. In the literature, communication as well as management scholars suggest similar approaches whereby the common point lies in an underlying two-dimensional structure. One dimension describes, in how far individuals try to meet their own needs and interests during a conversation, which is expressed in a more assertive and dominant communication style. The other dimension describes, to what extent people try to take the needs and interests of others into consideration during their communicative interactions which is associated with a more responsive communication style. Thus, communication style is conceptualized through the two characteristic values: concern for self and concern for others.

With reference to the literature I suppose that communication style is influenced respectively by an environmental factor and an individual factor. Since the purpose of this thesis is, to examine communication style in a workplace setting, the environmental factor emerges from the organizational environment. Several scholars perceive organizational culture as most promising factor to have an influence on how people communicate within an organization as it serves as reference frame on which members of an organization orient their communicative interactions in order to comply with the norm. According to the Competing Values Framework of Quinn and Rohrbaugh (2006), organizational culture is a multidimensional construct composed of four culture types: clan, market, hierarchy and adhocracy, each having its own specific characteristics. In comparison to the communication style components, it is hypothesized that self-concern might be predicted by a market and hierarchy culture while members of a clan and adhocracy culture are supposed to show other-concern.

The individual factor is related to personality characteristic traits in a larger sense. With reference to previous research, I rely on the concept of gender-role identity to determine personality traits. According to psychological predispositions, individuals have either masculine or feminine characteristic traits. Those traits are displayed in

individual communication style and findings from previous studies lead to the assumption that masculine-oriented persons show a self-concerned communication style while feminine-oriented persons are characterized by an other-oriented communication style.

The hypotheses model thus relates the components of the three constructs – communication style, organizational culture and gender-role identity – as demonstrated in Figure 2. The path leading from organizational culture types (market, hierarchy, adhocracy and clan) and gender-role identity (masculine, feminine) variables to the two dimensions of communication style reflect the assumptions derived from the literature.

Figure 2: Hypotheses Model
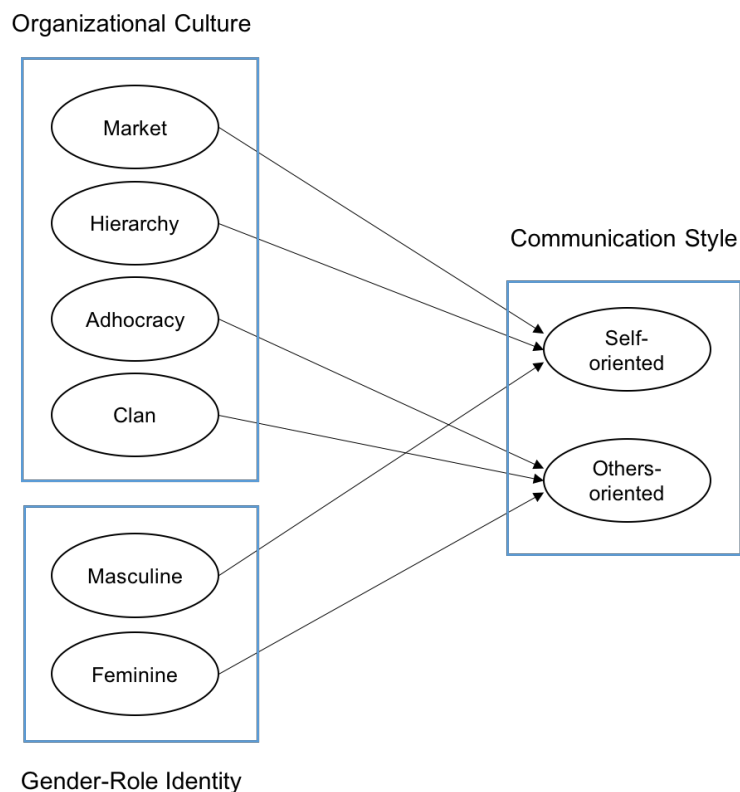
The methodology section establishes the experimental design as well as the measurement instruments for those constructs. It is further necessary to operationalize those concepts in order to provide an appropriate testing model which is based on this hypothesis model.

METHODOLOGY

To examine the assumed relationship between communication style, organizational culture and gender-role identity and to appropriately test the established hypotheses, a quantitative research design was chosen. Such a design allows the examination of larger samples and is considered as generally representative. The purpose of quantitative research is to provide an objective measurement and quantification of issues in generating numerical data (Atteslander & Cromm, 2006; Diekmann, 1995; Wyse, 2011). The evaluation of the collected data is performed by statistical instruments in order to illustrate the statistical relationship between the variables. Bernard (2000) defines a variable "as something that can take more than one value, and those values can be words or numbers" (p. 30). Thus, the determination of the variables provides the starting point for any quantitative research. Accordingly, the next step is to develop an appropriate survey instrument for the data collection, assuring a systematic procedure to gather the variables and indicators which are established through operationalization and rely on specific measurement instruments (Paier, 2010). Accordingly, the design of the survey and the operationalization of the variables is partly or completely based on already existing measurement scales which are described in the next sections.

For this study, a self-administered questionnaire was developed. Advantages of a self-administered questionnaire are a higher anonymity and in this respect the expectation of more honest responses, an interviewer bias is excluded as all respondents are subject to the same conditions and further, it is an appropriate instrument to reach a large target group in so far that costs are quite low (Bernard 2000; Paier, 2010). Disadvantages are small response rates, no control on how respondents interpret questions and it is difficult to ensure that the person who received the questionnaire is the same person who filled it out (Atteslander, 2006; Diekmann, 1995; Paier, 2010). Nevertheless, the self-administered questionnaire seems to be the appropriate instrument in order to collect numerical data providing information on how communication style at workplace is influenced.

The analysis of the collected data is conducted through structural equation modeling (SEM), a statistical methodology that can "simultaneously observe the effects and

changes of the variables in the model" (Thomas, Zolline & Hartmann, 2009, p. 298). SEM is often used when the hypotheses model is composed of multiple variables, providing evidence for its use in the present study. However, it has to be taken into consideration that SEM is more suited for confirmatory than exploratory analysis. Thus, in case that exploratory factor analysis should be required, SPSS, a frequently used predictive analytics software, is used instead. Likewise, for assessing internal consistency of the variables with the indicator of Cronbach's $\propto$, SPSS is a more appropriate tool. Although SEM is lacking in those two points, numerous positive characteristics outweigh those disadvantages for example in providing explicit estimates of error parameters and the ability of incorporating observed as well as unobserved variables (Byrne, 2010). The most frequently used SEM software is AMOS, an interface developed by IBM (International Business Machines Corporation), allowing to draw easily path diagrams reflecting the relationship between latent variables as well as the relationship between latent variables and observed items.

Survey Instrument

A questionnaire-based survey consisting of eight sections was developed (Appendix 1). In the first section, the participants were asked to reflect on their own personal communication style at work. The second section was designed to gain more detailed information about overall work experience, the company and the industry they are working. In the third section the respondents were asked about personal characteristics. The fourth section was divided into two parts. While the purpose of the first part was to get some general insights in the participant's perception of their organization, the second focused more precisely on their management team. In the fifth section the organizational culture was assessed by providing different descriptions about a specific aspect of the organization. The purpose of the sixth section was to gain insights in the organizational citizenship behavior of the participants in asking them about their engagement at work. In the seventh section participants were asked to indicate, how satisfied they were with different aspects of their career. In the final section, section eight, some demographic data like age, gender, nationality and educational level were collected.

Although there is a large number of topics present in this study, only the sections of communication style, personal characteristics and organizational culture are taken into consideration for further analysis as those measure the concepts derived from the literature review. The following paragraphs provide a more detailed description of those three sections and the operationalization of the underlying concepts.

Communication style

The construct of communication style is divided into self-oriented communication style and other-oriented communication style. Consequently, items measuring both underlying dimensions were developed. With reference to the concepts presented in the literature review, those items were adapted from previous research assessing the dual concerns of individuals during negotiation and conflict. According to the assumption that the specific concern dispositions are reflected by communication style alike, the instruments of the Dual Concern Model appear suitable for adaption of measuring communication style reflecting self- and other-orientation. In this respect, Rahim (1983) provided seminal work in testing the reliability and validity of the construct. The model proved evidence in measuring the styles of handling conflict, internal consistency was proven and four out of five scales were free from social desirability (Rahim, 1983). Akin, the MODE and ROCI (Rahim Organizational Conflict Inventory) instruments as advanced measurements of the Dual Concern Model and largely accepted questionnaires for assessing conflict styles were found to be moderately valid (Van de Vliert & Kabanoff, 1990). By contrast, other authors focused more precisely on the underlying dimensions of concern for self and for others (Sorenson, Morse & Savage, 1999; Rohades & Carnevale, 1999). Both studies found admissible endorsement for the consistency of the two-dimensionality of the model justifying the Dual Concern Model as valid instrument to apply it to communication style (Sorenson, Morse & Savage, 1999; Rohades & Carnevale, 1999).

The measurement instrument of this study contained 23 items, explicitly developed for this study and reflecting the underlying dimensions of concern for self and for others. All items were measured with a 9-point Likert scale ranging from 9 (strongly agree) to 1 (strongly disagree). Self-orientation was assessed amongst others with items like: "I

often use communication as a way to draw attention to my ideas and myself at work/ I often use communication as a way to assert my authority at work/ I often tend to communicate in a direct and assertive way at work". Other-orientation was assessed with statements like: "I tend to communicate my support for others at work/ When I communicate with others at work I tend to be understanding for their perspectives/ I employ a collaborative communication style at work". Participants were asked to indicate to what extent each statement reflects the way they are communicating at work.

Organizational culture

The construct of organizational culture is composed of the four cultures types: market, hierarch, clan and adhocracy, derived from Quinn and Rohrbaugh's Competing Values Framework (2006). In order to appropriately identify the various culture types on a comprehensive organizational level, the scale is divided into six categories: kind of organization, organizational leaders, management of employees, organizational glue, strategic emphasis and criteria for success. For each of those categories, there exist four alternative scenarios, giving a description of the dominant characteristics of each culture type, resulting in a total of 24 items. The CVF has already been assessed and generally proven as a valid measurement instrument by several researchers (Cameron & Freeman, 1991; Helfrich, Li, Mohr, Meterko & Sales, 2007; Howard, 1998). The studies of Cameron & Freeman (1991) as well as Howard (1998) generally provide confirming results for the Competing Values Model as valid metric for understanding, comparing and evaluating organizational cultures. However, actual research is more skeptical in claiming that a two-subscale instead of a four-subscale solutions seems to deliver a more parsimonious fit to the model (Helfrich, Li, Mohr, Meterko & Sales; 2007). They found strong correlations between culture types and raised questions whether organizational culture is perceived in the same way among managers and non-managers. Those findings need to be taken in consideration for the present study as well in order to appropriately interpret and handle potential difficulties of the results. Howard (1998) further points out the possibility of integrating opposing values within one culture to improve several strategic points referred to as "attitude dualities". For the present study, items were measured with a 9-point Likert scale ranging from 9

(strongly agree) to 1 (strongly disagree). Scenarios were taken from Quinn & Rohrbaugh's CVF (2006) and participants were asked to indicate to what extent each scenario applies to their organization.

Gender-Role Identity

The last scale taken into account for this study is composed of masculine and feminine gender-role identity. The items for each variable are taken from the BEM Sex Role Inventory (BSRI) which is a commonly used self-report measure of gender role identity (Bem, 1974). The initial instrument is divided into three scales: the BSRI-M scale, containing items describing 20 characteristic traits perceived as more desirable for male individuals, the BSRI-F scale composed of 20 items describing characteristic traits perceived as more desirable for female individuals and a neutral scale with another 20 items. The latter items initially accounted for a social desirability scale, but currently are used in order to provide a neutral context for the sex-typed items (Choi, Fuqua & Newman, 2007). Further, Choi, Fuqua & Newman (2008) found rather three than two factors on the sex-typed traits. While two factors represented typical masculine and feminine traits, the third factor was comprised of both, masculine and feminine traits, but which are perceived as negative like shy, childlike, forceful, aggressive etc. (Choi, Fuqua & Newman, 2008). Akin, Colley, Mulhern, Maltby and Wood (2009) confirmed in their study the assumption of a three factor structure, but in contrast to Choi, Fuqua and Newman (2008) the third factor appeared to be a bipolar factor which represents interpersonal sensitivity versus dominance. The factor loading on masculine items is labeled as personal agency and the factor loading on feminine items is labeled as interpersonal expressiveness. Regarding the present study, the neutral items were excluded from the questionnaire. Further, only ten masculine items (defends own beliefs, independent, assertive, strong personality, forceful, has leadership abilities, willing to take risks, dominant, willing to take a position, aggressive) as well as ten feminine items (affectionate, sympathetic, sensitive to the needs of others, understanding, compassionate, eager to soothe hurt feelings, warm, tender, loves children, gentle) were selected for the questionnaire. To maintain consistency for the respondents, the items were also measured with a 9-point Likert scale ranging from 9 (strongly agree) to 1 (strongly disagree).

Survey Procedure and Sample

The study is incorporated in a larger international research initiated by the "University Fellows International Research Consortium", an international group dedicated to practical business research. The survey in Switzerland was conducted by the Chair of Marketing of the University of Fribourg. As the questionnaire was originally designed in English, a French and German version needed to be developed in order to adapt it to the language conditions in Switzerland. The procedure of "translation-back-translation" was the most appropriate to ensure a high level on conformity between all versions.

The developed questionnaire-based survey was conducted among Swiss employees in 2014. The study appealed in particular to employees working in the private sector regardless the hierarchical level, they obtain in their organization. Apart from that, the questionnaire was sent together with a cover letter and a stamped return envelope to a random sample of 1248 participants of which 600 lived in the French-speaking part and 648 in the German-speaking part of Switzerland. The questionnaire for western Switzerland was sent in April and May as well as a reminder in May and for eastern Switzerland the initial questionnaire was sent in June and July as well as a reminder in August. Respondents interested in receiving a resume of the results were asked to sent their request via e-mail in order to maintain the anonymity of their response.

A total of 290 participants responded to the questionnaire utilized in the present study. This constitutes a return rate of 24% which is a satisfying result. Among those, 161 were from the French-speaking part of Switzerland (return rate of 26,8 %) and 129 were from the German-speaking part of Switzerland (return rate of 19,9%). Due to the fact, that not all participants did follow the directions of the questionnaire, specifically they did not respond to whole sections of the questionnaire, a certain number had to be excluded from analysis (n = 14). In the case of respondents where only a few answers were not completed, the missing values were replaced by the average of that particular item drawn from the response of the other participants.

The result was a final sample consisting of 276 participants. There were 45% female and 55% male respondents. The average age of the participants was 51 (standard

deviation (SD) = .697). Regarding their profession, the majority were working in the service sector (n = 133), followed by the industrial sector (n = 57) and only a minority in the resource-based sector (n = 4). With regard to the size of the organization, 55% of the questioned employees occupy a position in a company with less then 100 members, 22% in medium-sized companies with 100 to 1000 members, and 22% in large companies with more than 1000 members. In 40% of the firms there was an equal distribution of males and females, 34% of the respondents reported that there were more males in their company, and 26% stated that the number of females exceeded the number of males. Nevertheless, men (75%) are considerably more represented in higher hierarchical levels than women (10%). In only 15% of the cases, respondents reported an equal distribution of males and females in higher hierarchical levels (Appendix 2).

Conceptualizing the Testing Model

The underlying assumption from the hypotheses model is that organizational culture and gender-role identity are the explanatory mechanisms for variations in communication style. In order to appropriately test the elaborated hypotheses by means of structural equation modeling (SEM), the established hypotheses model needs to be converted into a testing model providing the basis for the analysis in the results section.

The SEM model consists of two submodels: a measurement model and a structural model. The measurement models reflect the elaborated measurement instruments of the different constructs whose relation is investigated in a later step. As the constructs of communication style, organizational culture and gender-role identity are not directly observed variables, but by means of different items designating the underlying constructs, they are considered as latent. Typically, latent variables are composed of a set of factors, representing the dimensions described during the literature review (Byrne, 2010). Thus, communication style is divided into the factors self-concerned and other-concerned, organizational culture is composed of the factors clan, market, hierarchy and adhocracy and finally, gender-role identity is composed of the dichotomous factors masculinity and femininity. Observable variables, measuring

those latent factors, are the items designed in the previous section. The items are either taken from former measurement instruments or elaborated on the basis of the literature review. Those items are then translated into scores, serving as indicators of the different latent constructs they are presumed to reflect. In AMOS, observed variables are represented by rectangles and unobserved latent variables are represented by ellipses. Further, each observed variable needs to be associated with an error term, representing a potential measurement error (Byrne, 2010). The purpose of the measurement model is then, to investigate the relation between sets of observed variables and their underlying latent constructs by means of factor analysis. A factor analysis is conducted in order to exclude items from the model that provide no acceptable measures for their associated factors. The relation between an item and its factor is represented by factor loadings. An item having a factor loading more than 0.5 is considered as appropriate to the specific factor (Arbuckle, 2011).

There exist two types of factor analysis: the exploratory factor analysis (EFA) and the confirmatory factor analysis (CFA). An EFA is principally conducted without prior knowledge regarding the links between an observed variable and the underlying latent construct or in case of uncertainty that the items measure the intended factors when developing a new instrument (Byrne, 2010). Consequently, an EFA is applied to the constructs of self- and other-concerned communication style, justified by the fact that no prior knowledge derived from an existing model regarding the link between the ducal concerns and communication style was found during the literature research and thus a new measurement instrument was developed. For this reason, it is important to determine the extent to which each designed item is related to the factors of self-concerned and other-concerned communication style. The CFA is conducted, when prior knowledge of the underlying variable structure of a concept is given or for reassessment of the EFA to confirm the found results. According to Byrne (2010) the CFA "postulates relations between the observed measures and underlying factors a priori and then tests this hypothesized structure statistically" (p.6). The purpose is to test, how good the data fits into the model to "determine the adequacy of its goodness-of-fit" (Byrne, 2010, p. 6). Accordingly, the factor loadings indicate the extent to which each item measures its underlying construct, and inappropriate items are eliminated from the model. The testing model for my study consists of three measurement models, measuring communication style, organizational culture and gender-role identity

seeking for a good fit of those constructs. Only when coherency within each single model is given, the analysis of the structural model can achieve satisfactory results.

The purpose of the structural model is to depict the relation among the latent constructs, as "it specifies the manner by which particular latent variables directly or indirectly influence (i.e. 'cause') changes in the values of certain other latent variables in the model" (Byrne, 2010, p. 13). Therefore, the relations between the applied concepts need to be specified in terms of variables. As communication style is supposed to be influenced by the other two constructs it is conceptualized as dependent variable and according to the underlying assumption of the hypotheses that the different organizational culture types and gender-role identity are the explanatory mechanisms, those are conceptualized as independent variables. The assumed influence of culture type and gender-role identity on self- or other-concerned communication style is symbolized by a single headed arrow pointing from the independent to the dependent variables. Those single headed arrows represent the structural regression coefficients and give information on how strong the impact of the variable of influence (culture types and gender-role identity) on the variable of interest (self- and other-concerned communication style) is (Byrne, 2010). It further has to be taken into consideration that one parameter in each set of regression paths needs to be fixed to 1.0, establishing the scale for the unmeasured factors in the model (Byrne, 2010). Due to the fact that the prediction of communication style from the other factors is presumed not to be without error, a residual error term is associated with each of the communication style factors. This residual reflects the "discrepancy between the hypothesized model and the observed data" (Byrne, 2010, p. 7). Further it should be taken into consideration, that some some factors might be intercorrelated which is in AMOS represented by curved double-headed arrows. This applies mostly for all latent factors belonging to the same construct. Also observed variables might be correlated, but as this cannot be predicted in advance as it has to be figured out during the analysis. As a result, the following SEM model emerges, composed of three measurement models and one structural model:

Figure 3: Testing Model for Structural Equation Modeling
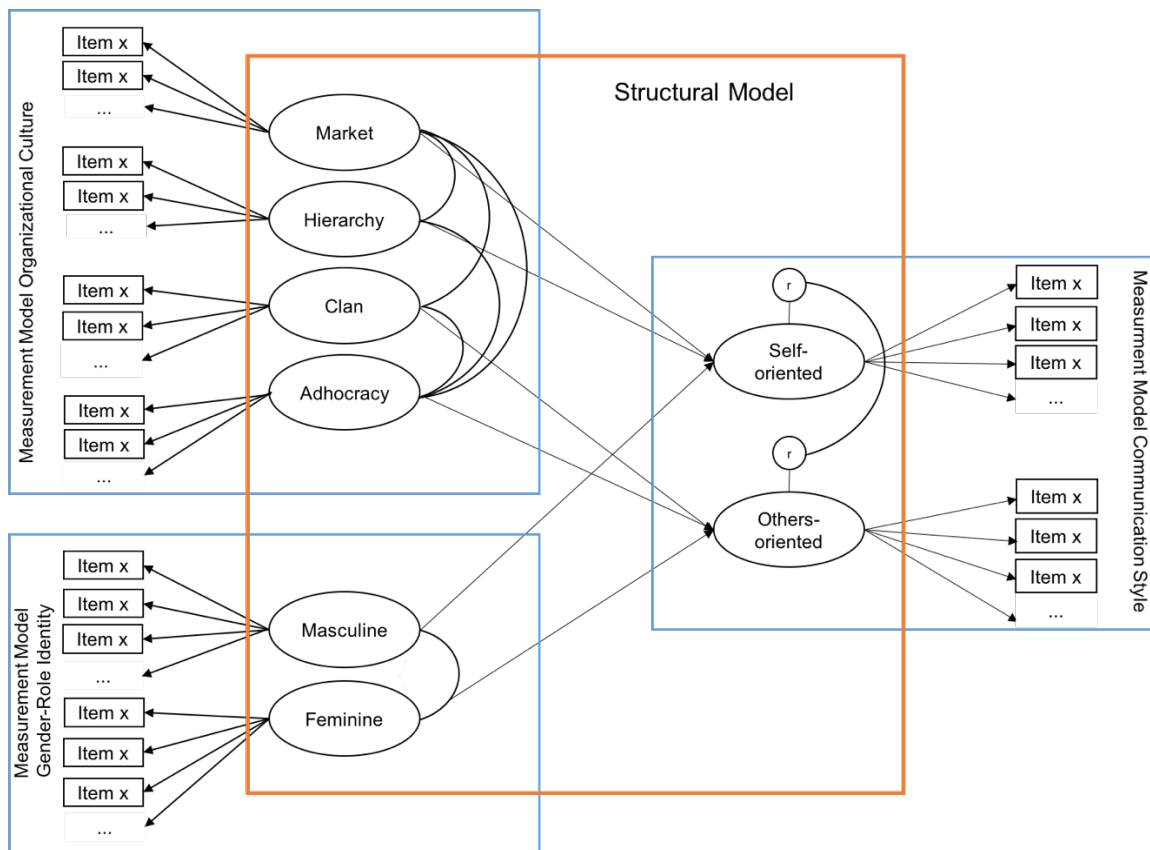
After running the analysis, AMOS SEM provides several indicators giving information on the appropriateness between the collected data and the proposed model. These measures include the chi-squared and degrees of freedom of the model, minimum value of discrepancy (CMIN), comparative fit index (CFI), and the root mean square error of approximation (RMSEA). Those measures apply equally for testing the measurement model (i.e. EFA/CFA) as well as for testing the structural model. An important ratio to measure the fit is the CMIN/DF, giving a first indication of the model fit. Byrne (2010) suggests that a CMIN/DF ratio < 2.00 represents an adequate fit. The CFI provides information on how well the hypothesis model adequately describes the sample data and is thus "derived from the comparison of a hypothesized model with the independence (or null) model" (Byrne, 2010, p. 78). The closer the CFI value is to 1, the better the model fit, whereupon a value >.90 already represents a well-fitting model and a value close .95 is generally advised in the literature to provide meritorious fit. The RMSEA designates the error of approximation in the population, in other words, the discrepancy between the hypothesized model and the collected data. It is suggested that a value of .05 or less indicates a good fit of the model (Arbuckle, 2011). Those indicators will be applied during the results section for the model assessment.

RESULTS

Preliminary Data Analysis: Exploratory and Confirmatory Factor Analysis

In order to verify that the established measurement items for the factors tap appropriately into the different constructs and provide good internal consistency, a factor analysis has to be conducted as already described in the methodology section. This is important, because it results in the elimination of items from every construct so that only items providing a good fit for their respective factors were taken into account for the testing model. Since the scales of organizational culture and gender-role identity are taken from existing constructs, it is important to further establish the validity and reliability of each scale. Consequently, it has to be verified that the items reflect what they are intended to measure (Iyer & Israel, 2012).

Communication Style

As the items to measure communication style were designed to operationalize concern for self and concern for others drawn from previous research, it is not clear, whether the items provide a good fit for their respective factors. For this reason, an exploratory factor analysis is conducted in a first step to gather information of general factor loadings and to check if the assumed two-factor structure is confirmed using the principal component analysis and an oblimin rotation method with Kaiser normalization. The analysis revealed seven different factors accounting for 61.88% of the variance. However, it has to be noted that the first two factors account for 34.37% of the variance and it is hence assumed that the other factors result from measurement errors or constitute subcategories of the underlying constructs (Appendix 3). The first three extracted components of this factor analysis represent the majority of items loading on them. However, when reducing the number of factors for extraction of only two, representing the underlying construct of concern for self and others, the items are loading more precisely on one or other.

In a second step, a confirmatory factor analysis (CFA) was completed in AMOS in order to ensure internal consistency for both variables. For reasons of clarity, the items

were inserted in the order of the factor loadings revealed by the EFA, thus items with the strongest factor loadings were inserted first. After running the analysis, items with factor loadings below 0.5 were removed from the model. Then, all items with too high cross-loadings on their respective counter construct (either self-orientation or other-orientation) were likewise excluded from the model, as they might cause distortions in the measurement. As the model is still not satisfactory, a look at the covariances reveals more detailed information and shows that apparently item @109[1] is problematic. Because its factor-loading achieves only the minimum of 0.5, it is also deleted, approving a better fit of the model (CMIN/DF = 2.233, CFI = .953, RMSEA = .067), but still not sufficient. Double-headed covariance arrows between error terms with too high values indicated by the modification indices (M.I) were drawn (between @102 and @108), improving the model to a large extent (CMIN/DF = 1.738, CFI = .973, RMSEA = .052). Although the CMIN/DF and CFI are acceptable, the RMSEA is still slightly above the cut-off value. As item @102 seems to be somewhat problematic in terms of covariances and cross-loadings, it is also removed from the model. However, results indicate only a slight improvement. Consequently, another covariance arrow between @112 and @113 is drawn, improving the model significantly. The minimum for the resulting model for communication style was achieved with χ^2 = 20.324 and 18 degrees of freedom and showed an excellent fit, CMIN/DF = 1.129, CFI = .996, RMSEA = .022 (Appendix 5). As a result, the CFA found 4 items measuring self-orientation with meritorious internal consistency (Cronbach's $\propto$ = .800) and 4 items measuring other-orientation with middling internal consistency (Cronbach's $\propto$ = .731) (Appendix 6). As a result, the adapted Dual Concern Model provides a valid and satisfying instrument for measuring concern for self and others in communication style and hence provides an essential basis for further analyses.

Organizational Culture

To ensure the validity of the concept and to verify the emergence of the four culture types, measure validation was performed in two steps. First, a CFA was conducted for organizational culture, scrutinizing the factor loadings of the items to their respective culture type. Items @501D, @502D and @504D showing factor loadings below 0.5

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[1] the wording oft the items mentioned in this section is listed in the Appendix 4

were deleted as necessary to purify scales. Akin, items with too high cross-loadings or correlations on other culture types (@501B, @506C, @504B, @501C, @502C) were removed from the culture measurement to ensure that only items measuring appropriately their respective culture type enter the final model. Covariance arrows were drawn between items with acceptable correlations (@503C and @503B; 303A and @503D). The minimum was achieved and the model obtained a χ^2 = 55.205 with 46 degrees of freedom. The remaining items after the factor analysis, measuring organizational culture, provide a meritorious fit for the model with CMIN/DF = 1.2, also baseline comparisons were excellent with CFI = .993 as well as the RMSEA = .027 (Appendix 7). Second, internal consistency of the different culture types was measured by the Cronbach's alpha coefficient in SPSS (Appendix 6). The analysis confirmed the four factor structure. The best fit showed the items of the clan culture, as four of six items could be included in the next step of the analysis. For the clan culture, an excellent internal consistency was achieved with Cronbach's $\propto$ = .864 which is much higher than the result of the study of Deshspandé, Farley and Webster (1993) who reported $\propto$ = .42. Regarding market culture and and adhocratic culture, half of the items from the original scale could be used for further analysis. The items of the market culture showed a good internal consistency with Cronbach's $\propto$ = .792 compared to $\propto$ = .82 measured in previous research (Deshspandé, Farley and Webster, 1993) and the internal consistency of the adhocratic culture was also acceptable with Cronbach's $\propto$ = .702, attaining almost a slightly better result than Deshspandé, Farley and Webster (1993) who measured $\propto$ = .66. Merely the hierarchy culture items were of less good fit, as only two could be taken into account for the measurement model. Nevertheless, the internal consistency of the remaining two items was middling with Cronbach's $\propto$ = .72 which is confirmed by precedent measures where $\propto$ = .71 (Deshspandé, Farley and Webster; 1993).

Consequently, the hypothesized model of organizational culture is accepted as providing a valid measurement instrument for further analysis. Further, it has to be noted that there are some significant positive correlations between several culture types represented by correlation arrows. Those correlations are reported by the estimates in Table 1 (Appendix 7).

Table 1: Correlations between the Culture Types

	Clan	Market	Hierarchy	Adhocracy
Clan	-			
Market	.058	-		
Hierarchy	.555***	.166*	-	
Adhocracy	.668***	.592***	.372***	-

***= p<.001; * = p<.05

Gender-Role Identity

As already mentioned in the methodology section, some studies rather suggest a three factor structure than a two factor structure. An exploratory factor analysis revealed a five factor structure explaining 63.81% of the total variance. Due to the fact that the first two factors explain 43% of the total variance, items belonging to the third to fifth factor are not considered as convincing in giving reason for distinct categories (Appendix 8). A two factor structure revealed more precise categories. However, from the ten BSRI-M items, those with factor loadings below 0.5 and too high cross-loadings to the BSRI-F scale were excluded from the model. The remaining items are: assertive, strong personality, has leadership abilities, willing to take risk and willing to take a position. Among those items, meritorious internal scale reliability is found with Cronbach's $\propto$ = .845 which is a bit less, compared to Bem (1974) who reported an $\propto$ = 0.86 as well as Choi, Fuqua and Newman (2008) (Appendix 6). From the BSRI-F scale, composed of the other ten items, six had acceptable factor loadings and showed no problematic cross-loadings for the BSRI-M scale: affectionate, sensitive of the needs of others, understanding, compassionate, warm and tender. Those items demonstrate homogenous item content as reliability indicates a Cronbach's $\propto$ = .802 which is consistent with the initial scale of Bem (1974) where femininity was $\propto$ = 0.80, but lies below the results of Choi, Fuqua and Newman who reported $\propto$ = 0.83 (Appendix 6). Thus, after removing items from the model because of the factor loadings and internal consistency criteria, the final model confirmed the masculinity and femininity factors, represented by the remaining eleven items. A significant covariance was reported within the femininity scale for the items affectionate (@302) and tender (@316) as well as within the masculinity scale between assertive (@305) and has

leadership abilities (@311). Thus covariance arrows were drawn between both in order to achieve additional measurement improvement. The final model for gender-role identity achieved the minimum and reports a χ^2 = 52.888 with 41 degrees of freedom. It further provides an adequate fit with CMIN/DF = 1.29 and the baseline comparisons are also on an excellent level with CFI = .989 as well as the RSMEA = .032 (Appendix 9). Therefore, the model provides good conditions for further analysis. It also has to be mentioned that there is quite a strong covariance between the masculinity and femininity factor.

After testing the internal consistency of the applied constructs which have been proven valid for further analytical process, the next step is to look at the full structural equation model, meaning the measurement models in combination with the structural model and to consequently test for the validity of a causal structure linking the different established constructs. The purpose is to test the hypothesized impact of organizational and personality variables on the two dimensions of communication style.

Hypotheses Testing

The hypotheses model is designed in AMOS and the summary notes pertinent to this model reveal that the minimum was achieved and and thereby yielding a χ^2 = 629.057 with 407 degrees of freedom. Although CMIN/DF = 1.546 and the RSMEA = .45 were somewhat well fitting for this initially hypothesized model, the goodness-of-fit CFI = .933 is just below the recommended value of .95, but generally acceptable (Appendix 10). Following, a look on the correlations is taken. Despite this is not the most important step of the analysis, it might be useful in later steps to have an idea how factors are correlated. Table 2 depicts the results among same construct variables as well as interconstruct variables, revealing correlation values of all factors on an acceptable level below 0.7, indicating that non of the variables are moving together, although several correlations are quite strong. Accordingly, the problem of possible multicollinearity, meaning that variables represent the same underlying construct, is excluded. The correlations further indicate that except of market and femininity all other factors are positively related. It becomes obvious that clan culture significantly

correlates with masculinity as well as with femininity, the adhocracy culture also obtains a highly significant correlation value for femininity. Akin, hierarchy shows considerable covariance with femininity (p = .003) and adhocracy with masculinity (p = .004). Those results indicate that the different variables are somewhat interrelated implying that if the value of one specific variable increases resp. decreases, it is highly likely that the value of the correlated variable increases resp. decreases in a similar extent revealing a linear relation. Only exception is the relationship between market and femininity due to the negative correlation values, signifying that one variable increases while the other decreases and vice versa.

Table 2: Correlations between Culture Types and Gender-Role Identity

	MA	HI	CL	AD	MAS	FEM
Market	-					
Hierarchy	.166*	-				
Clan	.056	.557***	-			
Adhocracy	.590***	.375***	.667***	-		
Masculinity	.119	.183*	.259***	.236**	-	
Femininity	-.020	.237**	.308***	.281***	.276***	-

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

The key parameters to review for hypotheses acceptation or rejection are the regression weights, representing the structural (i.e. causal) paths in the model and therefore providing information on the strength of the impact of organizational culture types and gender-role identity on self- or other-oriented communication style. The first set of hypotheses predicted that market and hierarchy culture would have a significant direct path to self-concerned communication style (H1a, H1b). The results show that only the impact of market culture on self-orientation is significant (.161) indicated by a p value of .02, while adhocracy has no significant impact. Thus, hypothesis H1a is supported, but H1b has to be rejected. Further, hypotheses H1c and H1d posited that clan and adhocracy culture are positively associated with other-concerned communication style. However, none of the paths were significant. Consequently, hypotheses H1c and H1d are rejected.

The second set of hypotheses proffered that masculine gender-role identity predicts a self-concerned communication style (H2a) whereas feminine gender-role identity predicts an other-concerned communication style (H2b). The results reveal that both paths were statistically significant, thus hypotheses H2a and H2b are supported.

Table 3: Regression Weights of the Hypothesis Model

	MA	HI	CL	AD	MAS	FEM
Self-Orientation	.161*	-.078	-	-	.450***	-
Other-Orientation	-	-	.072	.030	-	.630***

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

As a result, the paths from the culture types clan, adhocracy and hierarchy pointing towards the communication style variables were eliminated and a new analysis was conducted. The model proved significant and yielded a χ^2 = 631.911 with 410 degrees of freedom. All model fit indicators remained almost the same compared to the initial model revealing a CMIN/DF = 1.541, CFI = .933 and RSMEA = .044 (Appendix 11). Akin, the CFI still does not achieve the recommended 0.95 to indicate a sound fit. After removing the non-significant regression paths, interestingly the path from market to self-orientation reveals slightly weaker impact on self-orientation (.151; p = .026), regression paths from masculinity to self-concern and from femininity to other-concern are still significant. However, due to the fact that only market culture has a direct impact to communication style, the remaining culture type variables were eliminated. Results then indicate that model is less well supported, but solely correlations between organizational culture and gender-role identity are not satisfying for any explanation (a CMIN/DF = 1.782, CFI = .929 and RSMEA = .053) (Appendix 12).

An alternative model is designed in order to detect possible relations between culture types and communication style that have not been presumed by the hypotheses. Paths from all culture type variables as well as from both gender-role identity variables to both communication style variables are drawn. The new model shows almost the same fit as the previous model with CMIN/DF = 1.505, CFI = .939, RMSEA = .043 (Appendix 13). Remarkable differences are that, interestingly, femininity additionally reveals a statistically significant negative regression path to self-concern and market culture has

no significant impact on self-concerned communication style anymore (Table 4). In that sense, this model deteriorated in comparison to the original hypotheses model.

Table 4: Standardized Regression Weights between all Construct Variables

	MA	HI	CL	AD	MAS	FEM
Self-Orientation	.118	.022	-.068	.012	.578***	-.320***
Other-Orientation	.058	.122	.056	-.033	.-118	.683***

***= p<.001

For this reason, all non-significant paths pointing from culture types and gender-role identity towards communication style, with the highest p values were erased first (AD on SO, p=.957; AD on OO, p=882; HI on SO, p=.824; CL on OO, p=.759; MA on OO, p=705; CL on SO, p=.714). As a result, the path from market to self-concern gets significant (p=.047) again and additionally the one from hierarchy to other-concern (p=.031) indicates significance and the model fit improves with CMIN/DF = 1.485, CFI = .94, RMSEA = .042 (Appendix 14). However, deleting variables having no regression paths to communication style reveals again a deterioration in terms of the model fit indicators CMIN/DF = 1.608, CFI = .938 and RMSEA = .047 (Appendix 15).

Supplementary Analyses

To sum up, there are two key findings providing evidence for supplementary analysis by the construction of an experimental mediation model: first, the model deteriorates when erasing culture type variables. Second, there were some strong correlations between several culture type variables and communication style. This experimental model is designed in order to test whether gender-role identity functions as partial or full mediator between the other two constructs. A first preliminary test attempts to assess the direct impact of culture type variables on communication style variables. A look at the standardized regression weights reveals a potential positive impact of market on self-concern (.254) and hierarchy on other-orientation (.199). Further, there might be a positive relation between adhocracy and other-orientation (.143) and results indicate a general negative relationship between adhocracy and self-orientation (-.098)

as well as between market and other-orientation (-.090). Contrary to the assumption, hierarchy seems to have no influence at all on self-orientation (.001) (Appendix 16).

Table 5: Standardized Regression Weights between Communication Style and Organizational Culture Type

	MA	HI	CL	AD
Self-Orientation	.254	.001	.061	-.098
Other-Orientation	-.090	.199	.075	.143

However, for the moment non of those relationships is significant, but when erasing the paths with the least impact (i.e. the highest p values) step by step (HI on SO, p=.990; CL on SO, p=.759; CL on OO, p=.715; AD on SO, p=.682), results show significant impacts of market on self-orientation (.197; p=.007) and hierarchy on other-orientation (.225; p=.015) (Appendix 17). Adhocracy on other-orientation is approaching significance (p=.056) in the presence of the path of market on other-orientation, but becomes insignificant (p=.185) when erasing the latter path.

A second preliminary test was designed in order to test a potential impact of organizational culture types on gender-role identity. Interestingly, causal paths from adhocracy to femininity (.391) and from clan to masculinity (.248) have a significant positive influence, while the causal path from market to femininity (-.264) revealed a significant negative impact when erasing the paths with the least influence from clan to femininity and from adhocracy to masculinity (Appendix 18).

Table 6: Regression Weights between Gender-Role Identity and Organizational Culture Type

	MA	HI	CL	AD
Masculinity	.102	.027	.248**	-
Femininity	-.264**	.117	-	.391***

*** = p<.001; ** = p<.01;

As already confirmed in previous analysis, gender-role identity showed significant impacts on communication style, providing further evidence for a presumption of an at

least mediated relationship of culture type on communication style through gender-role identity. Consequently, regression paths from all culture type variables to both gender-role identity and communication style variables were drawn, and from the gender-role identity to communication style. As gender-role identity is operating now as mediating variable impacted by culture types, residual error terms need to be associated with the construct, linked by a double-headed curved arrow. Bottom line information of this model report that the minimum was achieved and thereby yielding a χ^2 value of 613.081 with 401 degrees of freedom. In reviewing the fit indices, it can be stated that the model is relatively well fitting as indicated by a CMIN/DF of 1.529 and a RMSEA of .044. The CFI = .936 is on an acceptable level but below the recommended value. However, only the paths from masculinity to self-concern and femininity to other-concern reveal a significant positive impact as well as the path from femininity to self-concern showing a significant negative impact (Appendix 19).

Table 7: Standardized Regression Weights of the Mediator Model

	MA	HI	CL	AD	MAS	FEM
Self-Orientation	.117	.020	-.070	.015	.578***	-.319***
Other-Orientation	.061	.109	.064	-.035	-.119	.685***
Masculinity	.074	.036	.215	.042	-	-
Femininity	-.271	.118	-.009	.404	-	-

***= p<.001

In view of the fact that preliminary analysis pointed out some significant paths from culture type to gender-role identity, I assume that there might be some paths interfering each other, so that the model in total gets deteriorated. Consequently, I suggest to consider mediated paths from each culture type to communication style separately. There are two main types of mediation: partial mediation and full mediation. Partial mediation predicts significant direct effects and indirect effects from X to Y. Thus, the unmediated relationship is significant as well as the X to mediator and mediator to Y relationship. In order to avoid to conclude that a partial mediated relationship is significant when in fact only the three direct effects are individually significant, a significance test for mediation must be performed, usually through bootstrapping. In other words, the condition of partial mediation is fulfilled when the direct effects as well

as the indirect effects are significant. The indirect effects are tested through the bootstrap estimates via two-tailed significance on standardized indirect effects. The other type of mediation is called full mediation which predicts that the direct effect of X on Y will not be significant in the presence of a mediator, but that the indirect effect through the mediator will be significant. Lastly, if either the X to mediator or mediator to Y relationships are not significant, mediation is not proven.

Figure 4: Partial and Full Mediation (adapted from Gaskin, 2010)
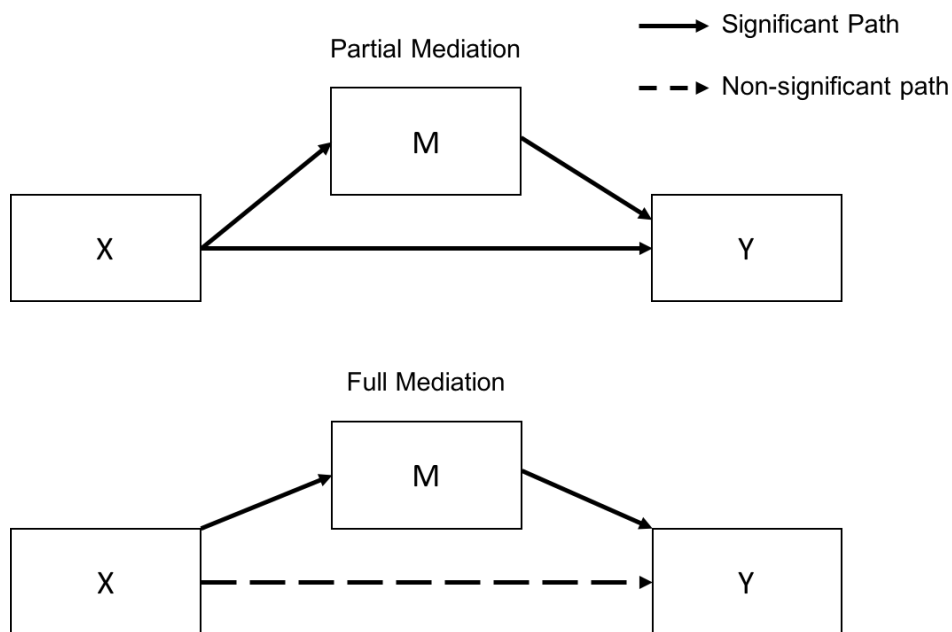
As the full path model revealed no significant paths between the culture types and communication style as well as culture types and gender-role identity, the effect between only two variables via one mediator is separately tested, in order to detect potential single effects. Thus, all paths except of the considered ones are erased from the model and analyses for each potential constellation are run. Table 8 indicates the results from partial mediation of culture types on communication style through masculine gender-role identity (Appendix 20). While the first and second column show the paths on self-orientation, the third and fourth column show the paths on other-orientation. It becomes evident that the relationship between market culture and self-orientation in presence of a masculine gender-role mediator becomes significant, although the impact is less than without a mediator (see Table 4). Also the paths between hierarchy, clan and adhocracy reveal a significant direct influence on other-orientation in the presence of the masculine gender construct. However, there is no

partial mediation due to the fact that the paths for direct and indirect effects do not both become significant on the same construct.

Table 8: Standardized Direct and Indirect Effects of Organizational Culture Type on Communication Style through Masculinity

	Self-Orientation		Other-Orientation	
	direct	indirect	direct	indirect
MA	**.143***	.057	.059	.034
HI	.011	.076	**.259****	.031
CL	-.063	**.106***	**.229***	.041
AD	.038	**.106****	**.198***	.047

* = p<.05; ** = p<.01

Table 9 displays the results from partial mediation between culture types and other-oriented communication style through feminine gender-role identity (Appendix 21). Again, the first and second column depict the paths from culture types to self-orientation, the third and fourth column show the paths to other-orientation. Although the direct influence of market and adhocracy on self-orientation are significant, no indirect effects are measured. However, there seems to be a partial mediation for hierarchy on other-orientation as the direct as well as the indirect effects are significant.

Table 9: Standardized Direct and Indirect Effects of Organizational Culture Type on Communication Style through Femininity

	Self-Orientation		Other-Orientation	
	direct	indirect	direct	indirect
MA	**.206***	.001	.078	-.014
HI	.105	-.010	**.151***	**.130***
CL	.074	-.015	.098	**.175****
AD	**.171***	-.016	.107	**.140****

* = p<.05; ** = p<.01

Further, results from Table 8 and 9 outline some significant indirect effects, indicating full mediation of several variables. Table 10 summarizes the results from those indirect effects, pointing out clearly that the impact of several organizational culture types on communication style is fully mediated by gender-role identity. Thus, femininity seems to completely mediate the relationship between hierarchy, clan and adhocracy with other-oriented communication style. Further, masculinity seems to completely mediate

the relationship between clan and adhocracy with self-oriented communication style. Conceptually this means that the entire amount of variance that some culture types explain on communication style is actually explained through gender-role identity.

Table 10: Regression Weights for Indirect Effects of Organizational Culture Type on Communication Style Through Gender-Role Identity as Mediator

	MA	HI	CL	AD
Masculinity				
Self-Orientation	.057	.076	**.106***	**.106***
Other-Orientation	.034	.031	.041	.047
Femininity				
Self-Orientation	.001	-.010	-.015	-.016
Other-Orientation	-.014	**.130***	**.175***	**.140***

* = p<.05;

In a next step, all mediated paths from organizational culture to communication style indicating a statistically significant relation, thus those with p values below the cutoff value of .05 as well as the significant direct path from market to self-orientation are drawn, resulting in a fully integrated model with all variables. The model fit is similar to previous results with CMIN/DF = 1.508, CFI = .937 and RMSEA = .43. However, some previous suggested relationships, for example between adhocracy and femininity, are not significant anymore. For this reason, regression paths with too high p values were removed from the model, to verify if some other paths become more significant. Indeed, removing paths with too high p values, improves the significance of some culture types on gender as well as communication style, illustrated in Table 11. Although hierarchy seemed to have a partial mediated relationship on other-orientation through femininity, in the full integrated model the path from hierarchy to femininity became insignificant. The remaining direct path seems to be significant as indicated by a p value of .044 regarding the standardized regression weights. However, a look at the bootstrapped standardized direct effects shows that hierarchy apparently has no real significant effect on other-orientation. Therefore, it has to be removed before attaining the final model (Appendix 22).

Table 11: Standardized Direct Effects between Culture Type, Gender-Role Identity and Communication Style Variables of the Final Model

	MA	HI	CL	AD	MAS	FEM
Self-Orientation	.158*	-	-	-	.438*	-
Other-Orientation	-	.142	-	-	-	.631*
Masculinity	-	-	.257*	-	-	-
Femininity	(-.314**)	-	-	.467**	-	-

* = p<.05; ** = p<.01

As a result, there are only indirect effects from clan culture to self-orientation mediated through masculinity and from adhocracy to other-orientation mediated through femininity. Additional testing interestingly revealed also a significant negative mediated relationship from market culture to other-orientation through femininity as can be seen in Table 12 (Appendix 23).

Table 12: Standardized Indirect Effects of Organizational Culture on Communication Style

	MA	CL	AD
Self-Orientation	-	.123**	-
Other-Orientation	-.213**	-	.318**

** = p<.01

The resulting final model achieves a χ^2 value of 592.737 with 362 degrees of freedom, yielding a model fit of CMIN/DF = 1.637, CFI = .925, RMSEA = .048. Although the CFI remains still below the recommended value, the model is considered as statistically sound. It again confirms, what already has been stated in the response of the research question before: The influence of the individual level factor on communication style is of relatively stronger impact than the organizational level factor in an integrated model with the presence of both constructs. While both gender-role identity variables proved significant on one of the communication style variables, only market culture attained a statistically significant influence on communication style. Figure 5 illustrates graphically the findings described above.

Figure 5: Final Mediator Model
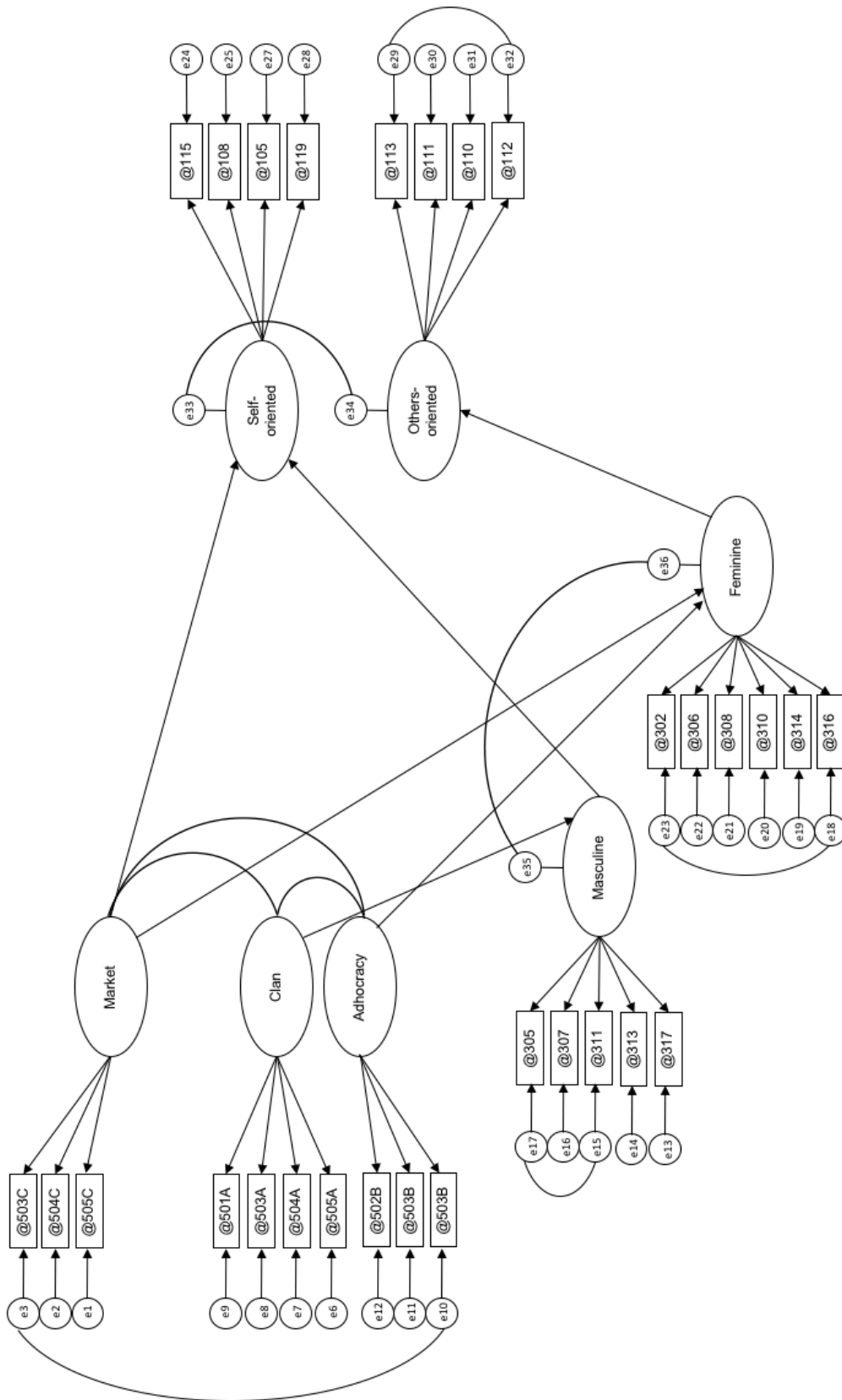
DISCUSSION

This study was set out to investigate the impact of organizational culture and gender-role identity as influencing factors on communication style at work. Communication style was conceptualized as a function of concern for self and concern for others according to the dimensions of the Dual Concern Model established in earlier research on negotiation and conflict strategies (Thomas & Kilmann, 1974; Renwick, 1975; Thomas, 1976; Pruitt, 1983; Rahim, 1983; Pruitt & Carnevale, 1993). For the moment, relatively little is known about influencing factors causing either a self-concerned or an other-concerned communication style.

Although past literature is filled with propositions that the environmental setting an individual is surrounded by, has an important impact on his/her communication behavior, profound research is missing, especially regarding a specific workplace setting. The most referred framework to distinguish different organizational settings is the organizational culture based on the Competing Values Framework (CVF) in associating a number of characteristics to different types of organizations (Quinn & Rohrbaugh, 2006). Notwithstanding, the remarks of several researchers claiming that organizational culture provides the reference frame for employees to orient their behavior and likewise their way of communicating within organizations, the extent of the influence has been neglected. Due to missing profound research on the relationship of those two constructs, hypotheses linking the four culture types market, hierarchy, clan and adhocracy with self-concerned or other-concerned communication style have been set up pursuant to similar attributes. Accordingly, it was suggested that market (H1a) and hierarchy (H1b) culture induce a self-concerned communication style and that clan (H1c) and adhocracy (H1d) culture imply an other-concerned communication style. Results showed that only H1a is supported yielding a significant positive influence of market culture on self-concerned communication style. The remaining hypotheses had to be rejected as no significant influence was found. Interestingly and contrary to the assumption, hierarchy reveals even a negative influence on self-orientation and moreover shows under certain conditions a significant positive impact on other-orientation, contradicting what was initially assumed. This was a somewhat unexpected finding and implies that rule-governed environments foster

concern for others and could be explained by a general internal orientation of the hierarchy culture according to the CVF.

Apart from the organizational factor, several researchers provided evidence that an individual factor rooted in an individual's personality predispositions is impacting communication style as well. In the examination of workplace settings, scholars seem especially interested in the construct of psychological gender-role identity according to the Bem Sex-Role Inventory (BSRI) which differentiates between masculine and feminine characteristic traits (Bem, 1974). In accordance with their findings, they suggest that masculine-oriented individuals display a self-concerned communication style (H2a) while feminine-oriented individuals are characterized by an other-concerned communication style (H2b). The results of the present study support those assumptions in revealing strong positive impacts in the predicted direction. Hence, those results generally confirm the findings of previous studies regarding the relationship between specific personality traits and a typical communication style (Giri, 2004; Kirtley & Weaver, 1999). Although Giri (2004) and Kirtley and Weaver (1999) used deviating concepts of personality, they rely on similar characteristic traits for masculinity and femininity. Kirtley and Weaver (1999) report in their study that agentic respondents, considered as equivalent to the masculinity construct, prefer a dominant, assertive and goal-oriented communication style describing similar characteristics as the self-concerned communication style. On the contrary, communal respondents, perceived as equivalent to the femininity construct, showed an expressive, selflessness and caring communication style which is reflected by the characteristics of the other-oriented communication style. Akin, in the study of Giri (2004) the noble communication style comprising attributes of self-concern is used by masculine gender-role and the reflective communication style revealing similar attributes as other-concern is predicted by feminine gender-role. Moreover, my study provides additional findings regarding the report of Calhoun and Smith (1999) who examined more precisely the construct of concern for self and concern for others, but rely on biological sex and not gender-role. They found that males typically score higher on self-concern while females typically score higher on other-concern (Calhoun & Smith, 1999). Those findings are now completed by the fact that individuals with masculine gender-role identity show a self-concerned communication style and individuals with feminine gender-role identity show an other-oriented communication style. Moreover,

findings revealed a statistically significant negative relationship between femininity and self-concern indicating that individuals with feminine gender-role identity do in general not employ a self-concerned communication style.

This leads further to the response of the research question, indicating clearly that the individual factor has a relatively stronger impact on personal communication style at work in terms of self- and other-orientation. Although some culture types reveal significant impacts under specific conditions, those are considered as negligible as those conditions fail their fit into an integrated model. Thus, from the four culture types, merely market culture which is perceived as a highly competitive, goal-oriented and challenging environment predicted significantly a self-concerned communication style. One possible explanation might be that in a market culture employees are exposed to higher competition among each other and hence need to be more assertive and dominant in their communication in order to be successful and to advance. This might in turn be imposed by the requirements of the industry wherein an organization is operating. It is generally assumed that organizations adapt their internal functioning to their external environment (O'Reilly, Chatman & Caldwell, 1991). In other words, organizations making their business in highly competitive and fast-paced industries are likely to display those modes of interaction in their internal environment, resulting from external pressure. Nevertheless, findings revealed that independent of the organizational culture, individuals show a communication style congruent to their personality and the influence of the organizational setting is considered minimal.

However, during the analysis I remarked quite strong correlations between some culture types and gender-role identity constructs and I took into consideration the fact of a mediated relationship between organizational culture and communication style through gender-role identity. Figure 6 illustrates the results of some preliminary analysis exploring the simple relationship between organizational culture types and gender-role identity which indeed confirmed some significant positive paths between adhocracy and femininity, clan and masculinity as well as a significant negative path between femininity and market. This implies that individuals with feminine characteristic traits are more likely to work in adhocratic cultures, but not in market cultures. Unexpectedly, masculine individuals are likely to be met in clan cultures which seems to be a contradiction as assertiveness, leadership and risk-taking do not comply

with participation, interpersonal cohesion and teamwork. The finding that feminine-oriented persons are less likely to work in market cultures is coherent to the general assumption, because the characteristics of both constructs are somewhat opposed and accordingly less likely to be integrated within the same environmental setting.

Figure 5: Significant Relationships between Organizational Culture Types and Gender-Role Identity
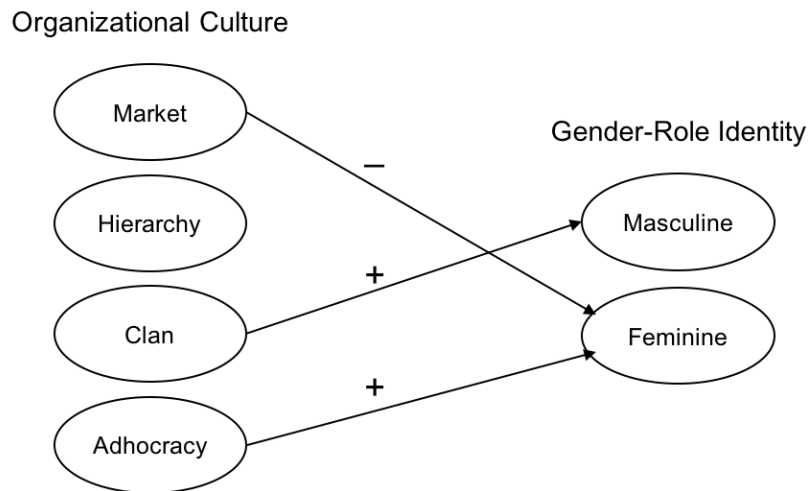
Further testing showed that when considering mediated relationships individually, there are some significant paths which however disappear when integrating those in a complete model comprising all significant paths between the variables. Nevertheless, full mediation reveals some definitively interesting results which are demonstrated in Figure 7. Clan and adhocracy indicate a significant positive relationship on self-orientation through a masculine gender-role mediator. Further, hierarchy, clan and adhocracy give evidence for a significant positive relationship to other-orientation when completely mediated through femininity. This implies that individuals working in specific cultures and which have either masculine or feminine characteristic traits, exert a significant influence on the communication style within that organization. However, results show a tendency for feminine individuals working in a hierarchic culture implying an other-oriented communication style. Within clan and adhocracy cultures, the communication style appears to be a function of the personality predispositions of the employees as the findings gave evidence for the presence of both communication styles. In other words, when there are more masculine-oriented individuals, the interpersonal communication is characterized by a self-concerned communication style and when there are more feminine-oriented individuals working in that

organization, the communication behavior is characterized by an other-oriented communication style.

Figure 6: Gender-Role Identity as Mediator between Culture Types and Communication Style
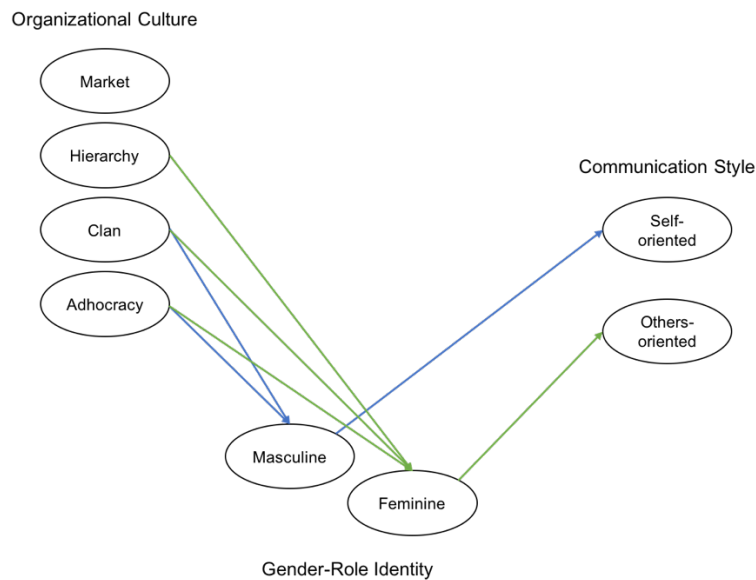
However, when integrating all significant paths found in single analyses, the final mediator model reveals lower significances between the constructs. That means, effects seem to be smaller when different culture types and different gender-role identities come together within one organization, for example when masculine and feminine individuals work in a clan culture, there will probably be no particular communication style. Several scholars further outlined that an organization might be characterized by more than one specific culture type, in claiming that next to a dominant culture, especially in large organizations different subcultures can emerge as a function of different departments or workgroups (French, Rayer, Rees & Rumbles, 2011; Miller, 1999). If this is the case, effects seem to cancel each other out, for example, the mediated path from hierarchy to other-orientation is significant in single analysis, but when clan or adhocracy interfere as additional factors, it becomes insignificant.

Thus, only a few paths revealing unmitigated significance were kept for the construction of the final model. First, the direct path from market culture to self-orientation plays an important role as this culture type as organizational factor solely proved evidence for an impact on communication style. Second, there are positive indirect effects of clan culture on self-orientation mediated by masculinity and of

adhocratic culture on other-orientation mediated by femininity. This means, when masculine individuals work in a clan culture, a self-concerned communication style is predominant. The latter finding contradicts the initial assumption as the characteristics of clan cultures and self-concerned communication style are somewhat opposed. But this discovery clearly outlines the importance of individual personality traits and their influence on communication style. Regardless of the cultural orientation of the organization, personality is likely to be the determining factor of the communication style at the workplace. Third, there is a negative mediated path of market culture on other-orientation through femininity which implies that individuals with a feminine gender-role identity do rather not work in market cultures and if so, they do not show an other-oriented communication style. In other words, in the special case of market culture, the organizational factor is of a stronger impact than the individual factor.

The explanatory mechanisms of the established model seem to be quite complex as certain conditions have to be fulfilled so that organizational culture reveals an impact on communication style. Further research in that respect is required. Nevertheless, it is clearly proven that gender-role identity plays an important role in the determination of communication style and moreover points out what personality profiles are likely to work in which organizational environment. Especially the latter finding detects relationships that have not been anticipated during the literature review, but fit into another theoretical construct which is known as person-organization fit (Gardner et al., 2012; Judge & Cable, 1997; O'Reilly, Chatman & Caldwell, 1991). Person-organization fit is defined as "the degree of congruence between individual needs and organizational structures; the match between an individual's value set and the organization's culture and value set" (Morley, 2007, p. 111). This indicates a causal link between an individual's personality and the organization's culture and the literature claims that employees are more attracted by organizations whose values are similar to their own, leading to higher job performance, satisfaction and organizational commitment (Gardner et al., 2012; Judge & Cable, 1997; Morley, 2007; O'Reilly, Chatman & Caldwell, 1991). For this reason, scholars found evidence to assess the relationship between the Big Five respectively the Five-Factor Model of personality and organizational culture permitting the application of those findings for recruiting processes (Gardner et al., 2012; Judge & Cable, 1997). Their findings suggest that extravert and less agreeable persons prefer aggressive and outcome oriented cultures

consistent with the characteristics of the market culture. Other studies found that masculinity has a positive correlation with extraversion and a negative correlation with agreeableness, which conversely means that masculine persons are more likely to fit into market cultures (Lippa & Connelly, 1990; Marusic & Bratko, 1998; Whitley & Gridley, 1993). Although the findings of my analyses do not confirm the relationship between masculinity and market culture, they reveal a strong negative relation between femininity and market culture, implying that feminine-oriented individuals do not work in that culture. Further, there appeared a positive relationship between hierarchy culture and conscientious persons as they seem to respond favorably to structured and precise organizational environments (Gardner et al., 2012; Judge & Cable, 1997). The allocation of the consciousness personality concept to gender-role traits however seems to be less clear. While Lippa and Connelly (1990) reported a positive relationship to femininity, Marusic and Bratko (1998) found positive correlations with masculinity. Similarly, the present study did not obtain any direct preference of masculine- or feminine-oriented persons for hierarchy culture, however there was a positive mediated relationship of hierarchy on other-orientation through femininity. Regarding clan culture, overall findings support a positive relation with extraversion and agreeableness explaining the result that masculine-oriented persons who tend to be more extraverted favor clan cultures (Gardner et al., 2012; Judge & Cable, 1997; Lippa & Connelly, 1990; Marusic & Bratko, 1998). Although feminine-oriented persons tend to score high on agreeableness and neuroticism which is according to the Gardner et al. (2012) study positively related to the clan culture, the findings of my study do not confirm a direct, but at least a mediated relationship on other-orientation through femininity. Finally, the literature supports a relationship between openness and adhocracy culture and Judge and Cable (1997) reported additionally a positive fit with neuroticism (Gardner et al., 2012). While openness is rather associated with masculinity, neuroticism fits into the femininity concept, which is confirmed by actual results, revealing a significant positive direct relation between femininity and adhocracy as well as a positive mediated relationship from adhocracy to self-orientation through masculinity. Hence, the findings of my study proved somewhat consistent with previous research and although a direct link between gender-role identity and organizational culture was not always given, the gender construct served at least as mediator between culture type and communication style and provided support in the predicted direction by previous studies.

Theoretical Implications

From this study emerges a new measure in order to assess communication style in terms of concern for self and concern for others, derived from conflict handling and negotiation strategies. This new measure proved internal validity and provides a sound fit to the data. Nonetheless, merely eight out of 23 items were used for the final model and exploratory factor analysis extracted more than two factors. Therefore, it remains to be considered if some items should be rewritten to ensure higher distinction or to include further categories like relationship-oriented etc. Although, the questionnaire was applied to a work context, it offers the potential of adaptation to all other contexts in striking out the wording "at work" or by replacing it through a specific context of interest.

With regard to the organizational culture model, preliminary analyses further revealed quite strong correlations between all culture types except of market and clan implying that those two types are greatly distinct. Although the correlation estimates between the other culture types remain under the cutoff value of .7 indicating sufficient independence and therefore excluding possible co-linearity, it should further be tested in how far respondents are able to differentiate between various culture types. In that respect, Helfrich, Li, Mohr, Meterko and Sales (2007) outlined differences in perception of the organizational culture within different departments and among individuals. They pointed out that it might be difficult to distinguish various cultural orientations as they are not always clearly visible and communicated, but subliminally perceptible.

The final results model further provides an important contribution to reveal the importance of personality traits in the determination of behavioral patterns in specific situations or contexts. Although a person might adapt his/her behavior in accordance to a given context, it remains a function of individual personality traits. Moreover, individuals seem to choose their organizational environment in accordance with their personal values and characteristics, which has already been explored under the concept of person-organization fit. Nevertheless, there was some distortion in the model when all culture types and gender-roles factors came together and results were less clear compared to separate analyses. In that sense, it might be interesting to investigate the composition of different personality types within an organization and the effect on different factors like efficiency, productivity and satisfaction.

Practical Implications

The results of this study provide also valuable information for managers regarding interpersonal communicative interactions within their organizations. The understanding of how their employees communicate, helps managers to better organize communication processes in order to enhance communication efficiency and to reduce potential conflicts. Larger organizations consisting of several teams might face those issues also on a team level as people in teams work more closely together than on the organizational level. Different personality and communication style profiles clash more directly and being aware of this fact enhances teamwork and results in more efficient processes.

The most important finding of this study is that particular personality profiles seem to be attracted by organizational cultures that correspond to their individual values and characteristics. If managers are aware of their culture, they are able to select employees during the recruiting process providing the best fit to their organization, but also to create a certain diversity. Organizations consisting of employees having the same personality profiles will lack innovation and creativity to be competitive and challenging, thus a certain diversity is required. Through specific trainings managers are able to raise the awareness of the company culture, the dominant personality profile of their employees and the communication style. The aim of achieving a balanced fit of those three constructs contributes to more coherency inside the organization and positively affects the external image of an organization.

Limitations of the Study

As for any research, there are some limitations to my study that have to be recognized. The first limitation lies in the fact that only three scales from a larger questionnaire were chosen for examination which may result in the neglect of other important links or relations. As the questionnaire assesses also other constructs like management trust, organizational citizenship behavior, career satisfaction etc. it offers manifold opportunities for additional and more comprehensive research. Second, as the study design was a self-administered questionnaire, the data collection method involved

merely self-report measures, likely to lead to a certain response bias. For respondents it might be difficult to appropriately estimate their own communication style or personality characteristics. Colleagues might have a different perception of communication style than the interrogated person. Further, employees might communicate differently depending on their interlocutor, especially with regard to their associated hierarchical level. In that respect, the questionnaire assesses only general communication tendencies independent of specific situations and communication partners. Third, already Rohit, Desphandé and Webster (1993) claim that more than one respondent within the same organization is required in order to appropriately assess organizational constructs, though organizational culture. Although questionnaires were sent to employees of the same company, the majority of the addressed persons were not working in the same organization and in those cases were more than one employee from that organization was contacted, it remains unclear due to anonymity, if all of them responded. Accordingly, it might be difficult sometimes for individuals to report the real strategic emphasis or organizational glue. Thus, multiple sources of data collection are warranted for the future and it might be interesting, to cooperate with organizations to have at least five respondents for each, which would ensure a more profound assessment of the organizational culture and allow peer ratings for the constructs of communication style and gender-role orientation. Therefore, a new questionnaire has to be designed including only those three constructs. Fourth, the sample was collected from the phone book, which resulted in a relatively high average age of the respondents. Consequently, this collection method is not suitable to access a younger workforce and might lead to some distortion. Future studies that include younger participants resulting in a report of more diverse and extensive experiences would ensure more representativeness.

CONCLUSION

Internal organizational communication has become a major concern in management studies. It is important to obtain profound insights into communication processes at the workplace as it allows to make statements about communication efficiency and workplace satisfaction. Thereby, interpersonal communication plays a major role in organizations, because it constitutes the basis of any communicative act and cannot be ignored when studying internal organizational communication (SHRM, 2008). Moreover, studies found that satisfactory interpersonal communication among employees fosters trust and respect due to profounder relationships which contributes in turn to greater engagement for the organization's purpose (Mishra, Boynton & Mishra, 2014; SHRM, 2008; Thomas, Zolin & Hartman, 2009). However, different people within an organization have different ways of communicating, conceptualized as communication style. The present study thus attempted to provide insights into communication tactics based on concern for self and concern for others as underlying dimensions. For the moment little is known about potential influencing factors on those communication style dimensions. While one stream of research focused on an environmental respectively organizational factor as having an impact on communication style, the other stream of research accounted for an individual factor. Although, profound research on the individual factor has already been conducted, the relation between the organizational factor and communication style was neglected. Authors accounted organizational culture as the most significant organizational factor having an impact on interpersonal interactions within organizations, as it provides a visible reference frame among which employees orient their behavior. Nevertheless, there are substantial gaps in assessing the impact of organizational culture and gender-role identity on self-concerned or other-concerned communication style.

The present study sought to fill these voids in providing an appropriate measurement instrument to assess communication style with the underlying dimensions of concern for self and concern for others. In establishing the link between those two communication style variables and the different culture type variables from the Competing Values Framework as well as masculinity and femininity from the BSRI gender-role identity construct a novel view on workplace communication was enabled. Those frameworks provided sound foundation for my hypotheses and although some

results contradicted the initial assumption, a mediated link between organizational culture and communication style through gender-role identity has clearly been proven. In that respect, findings revealed that the communication style at the workplace is rather a function of personality profiles present within an organization than of the organizational culture. However, organizational cultures affect to a large extent which personality profiles work within an organization. It appears that masculine-oriented individuals prefer a clan culture, because the participative environment is equal to their extraverted personality. Nonetheless, masculine-oriented persons tend to be more dominant and assertive in their personality which in turn implies a self-oriented communication style. Feminine-oriented persons seem attracted by the adhocracy culture and induce an other-oriented communication style within that specific culture. In contrast, feminine-oriented persons are less likely to be found in market cultures as neither the overall values of the organization nor the characteristics of the self-oriented communication style seem to match their personality. According to the results, organizations consisting of a market culture have a strong influence on a self-concerned communication style, while the influence of the other culture types is negligible. However, the complexity of the results requires more profound research, as under certain conditions, a hierarchic culture can also imply an other-oriented communication style and masculine- or feminine-oriented persons might be attracted by particular other organizational environments.

Raising the awareness among managers regarding the link of organizational culture, employee characteristics and communication style provide managers valuable insights in the functioning of their organizations. Maintaining a balanced mix of those components might lead to higher satisfaction among employees and enhance their engagement which in turn positively affects performance outcomes of the organization. Recruiting strategies may be implemented in order to select employees on a targeted basis. Raising the awareness among employees of different personalities and communication styles prevents conflicts resulting from communication problems and strengthens the internal cohesion. This consequently allows to represent strong internal bonds to the external environment impacting the image of the whole organization in order to attract job seekers with valuable skills but also to convey a positive image towards various stakeholders.

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Appendix 1 Questionnaire

Survey on Communication in the Workplace

conducted by

The University Fellows International Research Consortium

INTRODUCTION

This is a survey of communication styles used in the workplace, and we are asking for your help with this important research project that is being conducted by *The University Fellows International Research Consortium*, an international group dedicated to practical business research. Because only a few individuals have been invited to participate in this survey, your response is very important to us. The results of this survey will be valuable for better understanding the interpersonal dynamics within societies, organizations, and groups.

The questions are designed to be non-threatening. Your honest responses are necessary to ensure that the information accurately represents your beliefs. If you have any comments that you would like to add to the information requested, please write them on the back page(s) of the survey. Also, the survey is designed so that you can complete it as quickly as possible. It should take approximately 15-20 minutes.

Be assured that your identity will remain strictly anonymous. Your responses will be combined with those of many others and used only for statistical analysis. You may have access to the summarized findings from this survey, but not to individual survey data. If you would like to receive a copy of the final results, please send an email to Dr. David Ralston at {UFIRC.research@gmail.com}. In the meantime, if you have any questions concerning the survey, please feel free to contact Dr. Len Trevino at {ltrevino@loyno.edu}.

GENERAL INSTRUCTIONS

1. To ensure anonymity, do ***not*** put your name on the survey.

2. Please respond to all questions as quickly and carefully as possible. Your first impression is usually your most accurate impression. There are no right or wrong answers. We are interested simply in your opinions.

3. When you have completed this survey, please place it in the enclosed addressed, stamped envelope, and return it to:

> Dr. Len J. Trevino
> College of Business
> Loyola University New Orleans
> 6363 St. Charles Avenue, Campus Box 15
> New Orleans, LA 70118

Thank you for participating in this survey

INSTRUCTIONS: In this section, you will see a series of statements about communication styles at work.
Please reflect on your own personal communication style and preferences, and indicate how much you generally agree with each of the following statements.

In the space before each statement, write the number (1, 2, 3, 4, 5, 6, 7, 8, or 9) to indicate the degree to which you agree with each statement. When responding, please try to use the full range of numbers on this scale (1 to 9). There are no right or wrong answers to these questions.

Strongly Disagree		Moderately Disagree		Neutral		Moderately Agree		Strongly Agree
1	2	3	4	5	6	7	8	9

1. _____ When I communicate with others at work, I tend to assert and defend my own thoughts and beliefs.

2. _____ I often use communication as a way to draw attention to my ideas and myself at work.

3. _____ I often communicate in a way that expresses empathy or sympathy toward others at work.

4. _____ I tend to communicate in a direct and assertive way at work.

5. _____ I often use communication as a way to establish and enhance my own status at work.

6. _____ When I communicate with others at work, I often find myself interrupting them to gain command of the conversation.

7. _____ I employ a collaborative communication style at work.

8. _____ I often use communication as a way to assert my authority at work.

9. _____ When I communicate with others at work, I tend to be sensitive to their needs.

10. _____ When I communicate with others at work, I strive to establish equality between all participants.

11. _____ When I communicate with others at work, I tend to be understanding of their perspectives.

12. _____ I tend to communicate in a compassionate way at work.

13. _____ I tend to communicate my support for others at work.

14. _____ I tend to communicate in a responsive way at work (e.g., by smiling, or by nodding).

15. _____ When I communicate with others at work, I tend to dominate the conversation.

16. _____ During communications with others at work, I often invite them to participate and encourage them to elaborate on their thoughts.

17. _____ When I communicate with others at work, I tend to avoid disclosing personal information that might suggest weakness or vulnerability.

18. _____ I use communication as a primary way to establish and maintain relationships at work.

19. _____ My communication style at work tends to be somewhat dominant, forceful, or aggressive.

20. _____ When I communicate with others at work, I tend to use a more concrete style in which I provide details, disclose personal information, and use concrete reasoning.

21. _____ When I communicate with others at work, I tend to use a more abstract style, speaking in general terms that are removed from concrete experiences.

22. _____ I tend to communicate in an instrumental way at work, that is, as a means to accomplish goals.

23. _____ I regard communication at work as a way to build rapport (harmonious connections) with others.

INSTRUCTIONS: In this section, please provide information about your overall work experience, and the company and industry in which you work.

1. How many years of full-time work experience do you have? (please indicate your response in years, e.g., 26) _____

2. How many years have you been working at your present organization? _____

3. Which category best describes the industry in which you presently work? ***Select only <u>one</u> choice.***

   ____ Agriculture, forestry, or fishing   ____ Transportation, communication, utilities
   ____ Manufacturing   ____ Construction
   ____ Finance, insurance, or real estate   ____ Mining
   ____ Services (examples: health, legal, hotel,   ____ Public administration
        business services)   ____ Other (please specify
                       _____

4. What is the size of the company in which you presently work?
   ____ Less than 100 employees
   ____ 100 to 1,000 employees
   ____ More than 1,000 employees

5. How would you best describe the gender composition of <u>your organization</u>? (think of the overall organization – consider employees at all levels within the organization)
   ____ My organization is composed mostly of males
   ____ My organization is composed mostly of females
   ____ My organization is composed of a balanced mix of males and females

6. How would you describe the gendered composition of people in your organization who are at <u>your job level</u>?
   ____ People at my job level in my organization are predominately male
   ____ People at my job level in my organization are predominately female
   ____ In my organization, there is a balanced mix of males and females at my job level

7. Please select the response that best describes the gendered composition of <u>people one hierarchical level above you</u> at your present organization:
   ____ People one level above me in my organization are predominately male
   ____ People one level above me in my organization are predominately female
   ____ In my organization, there is a balanced mix of males and females one level above me

8. Is your immediate supervisor male or female?
   ____ Male
   ____ Female

9. Consider all of the people more experienced than yourself who have positively influenced your career, even those individuals who did not supervise your work. Of those individuals, are you able to identify at least one person with whom you have shared an especially close mentoring relationship?
   ____ Yes
   ____ No

10. *Answer this question only if the previous question (#9) was answered **"yes"**.* Was the mentor male or female?
    ____ Male
    ____ Female

INSTRUCTIONS: The following series of questions ask about some of your personal characteristics. Please rate the extent to which each of the following items describes you.

In the space before each statement, write the number (1, 2, 3, 4, 5, 6, 7, 8, or 9) to indicate the degree to which each of the following statements is true about <u>you</u>. When responding, please try to use the full range of numbers on this scale (1 to 9). There are no right or wrong answers to these questions.

Never True		Almost Never True		Sometimes True		Almost Always True		Always True
1	2	3	4	5	6	7	8	9

1. _____ Defends own beliefs

2. _____ Affectionate

3. _____ Independent

4. _____ Sympathetic

5. _____ Assertive

6. _____ Sensitive to the needs of others

7. _____ Strong personality

8. _____ Understanding

9. _____ Forceful

10. _____ Compassionate

11. _____ Has leadership abilities

12. _____ Eager to soothe hurt feelings

13. _____ Willing to take risks

14. _____ Warm

15. _____ Dominant

16. _____ Tender

17. _____ Willing to take a position

18. _____ Loves children

19. _____ Aggressive

20. _____ Gentle

INSTRUCTIONS: Please indicate how much you agree that each of the following statements accurately depicts your perception of the organization in which you currently work.

In the space before each statement, write the number (1, 2, 3, 4, 5, 6, 7, 8, or 9) that indicates the extent to which you believe each statement reflects what your organization is like. When responding, please try to use the full range of numbers on this scale (1 to 9). There are no right or wrong answers to these questions.

Very Inaccurate		Somewhat Inaccurate		Neither Accurate nor Inaccurate		Somewhat Accurate		Very Accurate
1	2	3	4	5	6	7	8	9

1. _____ If I make a mistake in my organization, it is often held against me.

2. _____ Members of my organization are able to bring up problems and tough issues.

3. _____ People in my organization sometimes reject others for being different.

4. _____ It is safe to take a risk in my organization.

5. _____ It is difficult to ask other members of my organization for help.

6. _____ No one in my organization would deliberately act in a way that undermines my efforts.

7. _____ Working with members of my organization, my unique skills and talents are valued and utilized.

XX

INSTRUCTIONS: Please think about the top management team of your organization. For each statement, select the response that best describes how much you agree or disagree with each statement.

In the space before each statement, write the number (1, 2, 3, 4, 5, 6, 7, 8, or 9) that indicates the extent to which you believe each statement reflects your perception of top management at your organization. When responding, please try to use the full range of numbers on this scale (1 to 9). There are no right or wrong answers to these questions.

Strongly Disagree		Moderately Disagree		Neutral		Moderately Agree		Strongly Agree
1	2	3	4	5	6	7	8	9

1. _____ Top management is very capable of performing its job.

2. _____ My needs and desires are very important to top management.

3. _____ Top management has much knowledge about the work that needs to be done.

4. _____ Top management has specialized capabilities that can increase our performance.

5. _____ Top management's actions and behaviors are very consistent.

6. _____ I do not feel the desire to have a good way to keep a close watch on top management.

7. _____ Top management is very concerned about my welfare.

8. _____ Top management is known to be successful at the things it tries to do.

9. _____ I feel confident about top management's skills.

10. _____ Top management tries hard to be fair in dealing with others.

11. _____ Top management will go out of its way to help me.

12. _____ I like top management's values.

13. _____ Sound principles seem to guide top management's behavior.

14. _____ I would be willing to let top management have total influence over immediate issues that are important to me.

15. _____ Top management is well qualified.

16. _____ Top management has a strong sense of justice.

17. _____ Top management would not knowingly do anything to hurt me.

18. _____ I would be willing to let top management have complete control over my future in the company.

19. _____ Top management really looks out for what is important to me.

20. _____ If someone questioned top management's motives, I would give top management the benefit of the doubt.

21. _____ I never have to wonder whether top management will stick to its word.

22. _____ I would be comfortable giving top management a task or problem, which was critical to me, even if I could not monitor their actions.

23. _____ I share similar interests with, and identify with, members of my organization's top management.

INSTRUCTIONS: The following statements refer to the culture of the organization for which you work. Please indicate the degree to which you agree or disagree with the following statements using the scale below.

Each of the six questions in this section consists of four alternative descriptions about a specific aspect of an organization. Each of these four descriptions tends to characterize differing approaches to organizing. Therefore, it is not likely that you would believe that all four descriptions for a single question would reflect what your organization is like.

In the space before each statement, write the number (1, 2, 3, 4, 5, 6, 7, 8, or 9) that indicates the extent to which you believe each statement reflects what your organization is like. When responding, please try to use the full range of numbers on this scale (1 to 9). There are no right or wrong answers to these questions.

Strongly Disagree		Moderately Disagree		Neutral		Moderately Agree		Strongly Agree
1	2	3	4	5	6	7	8	9

1. *Kind of Organization*

A. _____ My organization is a very special place. It is like an extended family. People seem to share a lot of themselves.

B. _____ My organization is a very dynamic and entrepreneurial place. People are willing to take risks and be vulnerable.

C. _____ My organization is very production oriented. A major concern is with getting the job done. People are very competitive and achievement oriented.

D. _____ My organization is a very formalized and structured place. Bureaucratic procedures generally govern what people do.

2. *Organizational Leaders*

A. _____ Leaders in my organization are generally considered to be mentors, facilitators, or parental figures.

B. _____ Leaders in my organization are generally considered to be entrepreneurs, innovators or risk takers.

C. _____ Leaders in my organization are generally considered to be hard-drivers, producers, or competitors.

D. _____ Leaders in my organization are generally considered to be coordinators, organizers, or efficiency experts.

3. *Management of Employees*

A. _____ The management style in my organization is characterized by teamwork, consensus, and participation.

B. _____ The management style in my organization is characterized by individual risk-taking.

C. _____ The management style in my organization is characterized by hard-driving competitiveness, goal-directedness, and achievement.

D. _____ The management style in my organization is characterized by careful monitoring of performance, longevity in position, and predictability.

4. *Organizational Glue*

A. _____ The glue that holds my organization together is loyalty and mutual trust. Commitment to my organization runs high.

B. _____ The glue that holds my organization together is orientation toward innovation and development. There is an emphasis on being on the cutting edge.

C. _____ The glue that holds my organization together is the emphasis on production and goal accomplishment. Marketplace aggressiveness is a common theme.

D. _____ The glue that holds my organization together is formal rules and policies. Maintaining a smooth running organization is important.

5. *Strategic Emphasis*

A. _____ My organization emphasizes human development. High trust, openness, and participation persist.

B. _____ My organization emphasizes acquiring new resources and meeting new challenges. Trying new things and prospecting for new opportunities are valued.

C. _____ My organization emphasizes competitive actions and achievement. Measurement targets and objectives are dominant.

D. _____ My organization emphasizes permanence and stability. Efficient, smooth operations are important.

6. *Criteria for Success*

A. _____ My organization defines success on the basis of development of human resources, teamwork, and concern for people.

B. _____ My organization defines success on the basis of having the most unique or the newest products. It is a product leader and innovator.

C. _____ My organization defines success on the basis of market penetration and market share. Competitive market leadership is key.

D. _____ My organization defines success on the basis of efficiency. Dependable delivery, smooth scheduling, and low cost production are crucial.

SECTION 6 of 8

INSTRUCTIONS: The following statements refer to activities in which individuals may choose to engage at work. Please indicate the extent to which you have personally engaged in the following activities.

In the space before each statement, write the number (1, 2, 3, 4, 5, 6, 7, 8, or 9) to indicate the degree to which each of the following statements is true about <u>you</u>. When responding, please try to use the full range of numbers on this scale (1 to 9). There are no right or wrong answers to these questions.

To No Extent		To a Slight Extent		To Some Extent		To A Large Extent		To a Great Extent
1	2	3	4	5	6	7	8	9

1. _____ Willingly given of my time to help coworkers who have work-related problems.

2. _____ Taken time out of my own busy schedule to help with recruiting or training new employees.

3. _____ "Touched base" with others before initiating actions that might affect them.

4. _____ Taken steps to try to prevent problems with coworkers and any other personnel in the organization.

5. _____ Encouraged others when they were down.

6. _____ Acted as a "peacemaker" when others in the organization have disagreements.

7. _____ Acted as a stabilizing influence in the organization when dissention occurs.

8. _____ Attended functions that were not required but which helped the organization's image.

9. _____ Attended training/information sessions that employees were encouraged but not required to attend.

10. _____ Attended and actively participated in organizational meetings.

11. _____ Consumed time complaining about trivial matters.

12. _____ Found fault with what the organization is doing.

13. _____ Tended to make "mountains out of molehills" (make problems bigger than they are).

14. _____ Focused on what was wrong with my situation rather than the positive side of it.

INSTRUCTIONS: The following statements refer to perceptions of career satisfaction. Please indicate the extent to which you agree with each of the following statements.

In the space before each statement, write the number (1, 2, 3, 4, 5, 6, 7, 8, or 9) to indicate the degree to which each of the following statements is true about <u>you</u>. When responding, please try to use the full range of numbers on this scale (1 to 9). There are no right or wrong answers to these questions.

Strongly Disagree		**Disagree to Some Extent**		**Uncertain**		**Agree to Some Extent**		**Strongly Agree**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**

1. _____ I am satisfied with the success I have achieved in my career.

2. _____ I am satisfied with the progress I have made toward meeting my overall career goals.

3. _____ I am satisfied with the progress I have made toward meeting my goals for income.

4. _____ I am satisfied with the progress I have made toward meeting my goals for advancement.

5. _____ I am satisfied with the progress I have made toward meeting my goals for the development of new skills.

SECTION 8 of 8

INSTRUCTIONS: Please provide the following demographic data about yourself.

1. Age _____

2. Gender:

   _____ Male
   _____ Female

3. What is your nationality? _____

4. What is your country of birth? _____

5. What is your first language? _____

6. In which country did you live the longest (5 years or more) before the age of 15? _____

7. What is the highest level of education you have completed?

   _____ 4 or fewer years completed
   _____ 5 to 8 years completed
   _____ 9 to 12 years completed
   _____ 13 to 16 years completed [Bachelor's degree]
   _____ Master's Degree
   _____ Doctorate Degree

Appendix 2 Sample Descriptives

Gender Frequencies

Gender

		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	0	152	55.1	55.1	55.1
	1	124	44.9	44.9	100.0
	Total	276	100.0	100.0	

Age Descriptives

Statistiques descriptives

	N	Minimum	Maximum	Moyenne		Ecart type
	Statistiques	Statistiques	Statistiques	Statistiques	Erreur std.	Statistiques
Age	275	22	75	50.64	.697	11.561
N valide (liste)	275					

Professional Sector Frequences

2-03

		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	1	4	1.4	1.5	1.5
	2	32	11.6	11.7	13.1
	3	38	13.8	13.9	27.0
	4	63	22.8	23.0	50.0
	5	15	5.4	5.5	55.5
	6	25	9.1	9.1	64.6
	8	17	6.2	6.2	70.8
	9	80	29.0	29.2	100.0
	Total	274	99.3	100.0	
Manquant	Système	2	.7		
Total		276	100.0		

Note : Some professions were grouped in order to obtain generalized sector descriptions.

1= resource-based sector
2+6 = industry-based sector
3+4+5+8= service-based sector

Organization Size Frequencies

2-04

		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	1	153	55.4	55.4	55.4
	2	61	22.1	22.1	77.5
	3	62	22.5	22.5	100.0
	Total	276	100.0	100.0	

Distribution of Males and Females on the Same Hierarchical Level

2-05

		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	1	93	33.7	33.7	33.7
	2	72	26.1	26.1	59.8
	3	111	40.2	40.2	100.0
	Total	276	100.0	100.0	

Distribution of Males and Females on Higher Hierarchical Levels

2-07

		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	1	189	68.5	75.0	75.0
	2	25	9.1	9.9	84.9
	3	38	13.8	15.1	100.0
	Total	252	91.3	100.0	
Manquant	Système	24	8.7		
Total		276	100.0		

Appendix 3 EFA Communication Styles

Variance totale expliquée

Composante	Valeurs propres initiales			Sommes extraites du carré des chargements	
	Total	% de la variance	% cumulé	Total	% de la variance
1	4.004	17.410	17.410	4.004	17.410
2	3.900	16.957	34.367	3.900	16.957
3	1.764	7.668	42.035	1.764	7.668
4	1.279	5.560	47.594	1.279	5.560
5	1.147	4.988	52.582	1.147	4.988
6	1.106	4.807	57.388	1.106	4.807
7	1.035	4.498	61.887	1.035	4.498

Appendix 4 Eliminated Variables for Communication Style and Organizational Culture

@102	I often use communication as a way to draw attention to my ideas and myself at work.
@108	I often use communication as a way to assert my authority at work.
@109	When I communicate with others at work, I tend to be sensitive to their needs.
@112	I tend to communicate in a compassionate way at work.
@113	I tend to communicate my support for others at work.

@501B	My organization is a very dynamic and entrepreneurial place. People are willing to take risk and be vulnerable.
@501C	My organization is very production oriented. A major concern is with getting the job done. People are very competitive and achievement oriented.
@501D	My organization is a very formalized and structured place. Bureaucratic procedures generally govern what people do.
@502C	Leaders in my organization are generally considered to be hard-drivers, producers, or competitors.
@502D	Leaders in my organization are generally considered to be coordinators, organizers, or efficiency experts.
@503A	The management style in my organization is characterized by teamwork, consensus, and participation.
@503B	The management style in my organization is characterized by individual risk-taking.
@503C	The management style in my organization is characterized by hard-driving competitiveness, goal-directedness, and achievement.

@504B	The glue that holds my organization together is orientation toward innovation and development. There is an emphasis on being on the cutting edge.
@504D	The glue that holds my organization together is formal rules and policies. Maintaining a smooth running organization is important.
@506C	My organization defines success on the basis of market penetration and market share. Competitive market leadership is key.

Appendix 5 Communication Style Variable

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments:	36
Number of distinct parameters to be estimated:	18
Degrees of freedom (36 - 18):	18

Result (Default model)

Minimum was achieved
Chi-square = 20.324
Degrees of freedom = 18
Probability level = .315

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	18	20.324	18	.315	1.129
Saturated model	36	.000	0		
Independence model	8	599.484	28	.000	21.410

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.966	.947	.996	.994	.996
Saturated model	1.000		1.000		1.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.022	.000	.060	.869
Independence model	.272	.254	.292	.000

Estimates

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
@106_1 <--- SO	1.000				
@108_1 <--- SO	1.000	.112	8.957	***	par_1
@115_1 <--- SO	1.108	.111	9.984	***	par_2
@113_1 <--- OO	1.000				
@111_1 <--- OO	1.050	.149	7.038	***	par_3
@110_1 <--- OO	1.001	.141	7.101	***	par_4
@112_1 <--- OO	.932	.127	7.337	***	par_5
@119_1 <--- SO	1.101	.116	9.516	***	par_7

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
@106_1 <--- SO	.671
@108_1 <--- SO	.660
@115_1 <--- SO	.790
@113_1 <--- OO	.622
@111_1 <--- OO	.759
@110_1 <--- OO	.615
@112_1 <--- OO	.496
@119_1 <--- SO	.717

Covariances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
SO <--> OO	-.314	.112	-2.804	.005	par_6
e12 <--> e16	.518	.157	3.306	***	par_8

Correlations: (Group number 1 - Default model)

	Estimate
SO <--> OO	-.236
e12 <--> e16	.281

Appendix 6 Cronbach's ∝

Communication Style Variable

RELIABILITY Self-Orientation

/VARIABLES=@106_1 @108_1 @115_1 @119_1
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.

Fiabilité

Statistiques de fiabilité

Alpha de Cronbach	Nombre d'éléments
.800	4

RELIABILITY Other-Orientation

/VARIABLES=@110_1 @111_1 @112_1 @113_1
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.

Fiabilité

Statistiques de fiabilité

Alpha de Cronbach	Nombre d'éléments
.731	4

RELIABILITY – Market Culture

/VARIABLES=@503C_1 @504C_1 @505C_1
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.

Fiabilité

Alpha de Cronbach	Nombre d'éléments
.792	3

RELIABILITY – Hierarchy Culture

/VARIABLES=@503D_1 @505D_1
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.

Fiabilité

Statistiques de fiabilité	
Alpha de Cronbach	Nombre d'éléments
.720	2

RELIABILITY – Clan Culture

/VARIABLES=@501A_1 @503A_1 @504A_1 @505A_1
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.

Fiabilité

Statistiques de fiabilité	
Alpha de Cronbach	Nombre d'éléments
.864	4

RELIABILITY – Adhocracy Culture

```
/VARIABLES=@502B_1 @503B_1 @505B_1
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.
```

Fiabilité

Statistiques de fiabilité

Alpha de Cronbach	Nombre d'éléments
.702	3

Gender-Role Identity Variables

RELIABILITY – Masculine Gender-Role Identity

```
/VARIABLES=@302_1 @306_1 @308_1 @310_1 @314_1 @316_1
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.
```

Fiabilité

Statistiques de fiabilité

Alpha de Cronbach	Nombre d'éléments
.845	6

RELIABILITY Feminine Gender-Role Identity

```
/VARIABLES=@305_1 @307_1 @311_1 @313_1 @317_1
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.
```

Statistiques de fiabilité

Alpha de Cronbach	Nombre d'éléments
.802	5

Appendix 7 Organizational Culture Variable

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments:	78
Number of distinct parameters to be estimated:	32
Degrees of freedom (78 - 32):	46

Result (Default model)

Minimum was achieved
Chi-square = 55.205
Degrees of freedom = 46
Probability level = .166

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	32	55.205	46	.166	1.200
Saturated model	78	.000	0		
Independence model	12	1339.486	66	.000	20.295

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.959	.941	.993	.990	.993
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.027	.000	.050	.947
Independence model	.265	.253	.277	.000

Estimates

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
@505D_1	<---	HI	1.094	.158	6.903	***	par_1
@503D_1	<---	HI	1.000				
@505A_1	<---	CL	.990	.066	15.104	***	par_2
@504A_1	<---	CL	1.000				
@503A_1	<---	CL	.924	.064	14.343	***	par_3
@501A_1	<---	CL	.824	.067	12.338	***	par_4
@505B_1	<---	AD	1.269	.139	9.159	***	par_5
@503B_1	<---	AD	1.000				
@502B_1	<---	AD	1.065	.133	8.009	***	par_6
@505C_1	<---	MA	1.312	.127	10.312	***	par_7
@504C_1	<---	MA	1.193	.121	9.847	***	par_8
@503C_1	<---	MA	1.000				

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
@505D_1	<---	HI	.833
@503D_1	<---	HI	.682
@505A_1	<---	CL	.819
@504A_1	<---	CL	.827
@503A_1	<---	CL	.787
@501A_1	<---	CL	.698
@505B_1	<---	AD	.768
@503B_1	<---	AD	.609
@502B_1	<---	AD	.618
@505C_1	<---	MA	.870
@504C_1	<---	MA	.724
@503C_1	<---	MA	.654

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
HI	<-->	MA	.328	.156	2.096	.036	par_9
CL	<-->	MA	.146	.178	.818	.413	par_10
AD	<-->	MA	1.067	.203	5.268	***	par_11
HI	<-->	CL	1.351	.250	5.402	***	par_12
HI	<-->	AD	.652	.171	3.823	***	par_13

			Estimate	S.E.	C.R.	P	Label
CL	<-->	AD	1.489	.232	6.429	***	par_14
e16	<-->	e22	.551	.191	2.881	.004	par_15
e4	<-->	e10	-.442	.146	-3.025	.002	par_16

Correlations: (Group number 1 - Default model)

			Estimate
HI	<-->	MA	.166
CL	<-->	MA	.058
AD	<-->	MA	.592
HI	<-->	CL	.555
HI	<-->	AD	.372
CL	<-->	AD	.668
e16	<-->	e22	.203
e4	<-->	e10	-.233

Appendix 8 EFA Gender-Role Identity

Variance totale expliquée

Composante	Sommes extraites du carré des chargements	Sommes de rotation du carré des chargements[a]
	% cumulé	Total
1	25.544	4.232
2	43.542	3.951
3	50.880	1.472
4	56.463	2.678
5	61.497	2.239

Appendix 9 Gender-Role Identity Variable

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments:	66
Number of distinct parameters to be estimated:	25
Degrees of freedom (66 - 25):	41

Result (Default model)
Minimum was achieved
Chi-square = 52.888
Degrees of freedom = 41
Probability level = .101

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	25	52.888	41	.101	1.290
Saturated model	66	.000	0		
Independence model	11	1155.153	55	.000	21.003

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.954	.939	.989	.986	.989
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.032	.000	.056	.885
Independence model	.270	.256	.283	.000

Estimates

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
@316_1	<---	FEM	1.015	.116	8.713	***	par_1
@314_1	<---	FEM	.784	.076	10.385	***	par_2
@310_1	<---	FEM	1.032	.079	13.135	***	par_3
@308_1	<---	FEM	.847	.064	13.180	***	par_4
@306_1	<---	FEM	1.000				
@302_1	<---	FEM	.920	.090	10.184	***	par_5
@305_1	<---	MAS	.794	.079	10.057	***	par_6
@307_1	<---	MAS	1.000				
@311_1	<---	MAS	.817	.096	8.497	***	par_7
@313_1	<---	MAS	.648	.079	8.257	***	par_8
@317_1	<---	MAS	.694	.066	10.470	***	par_9

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
@316_1	<---	FEM	.539
@314_1	<---	FEM	.627
@310_1	<---	FEM	.771
@308_1	<---	FEM	.774
@306_1	<---	FEM	.813
@302_1	<---	FEM	.618
@305_1	<---	MAS	.691
@307_1	<---	MAS	.789
@311_1	<---	MAS	.585
@313_1	<---	MAS	.549
@317_1	<---	MAS	.709

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
FEM	<-->	MAS	.473	.116	4.092	***	par_10
e3	<-->	e10	.999	.166	6.027	***	par_11
e13	<-->	e16	.375	.139	2.705	.007	par_12

Correlations: (Group number 1 - Default model)

	Estimate
FEM <--> MAS	.316
e3 <--> e10	.442
e13 <--> e16	.216

Appendix 10 Results of the initial Hypothesis Model

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments:	527
Number of distinct parameters to be estimated:	120
Degrees of freedom (527 - 120):	407

Result (Default model)

Minimum was achieved
Chi-square = 629.057
Degrees of freedom = 407
Probability level = .000

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	120	629.057	407	.000	1.546
Saturated model	527	.000	0		
Independence model	62	3766.153	465	.000	8.099

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.833	.809	.934	.923	.933
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.045	.038	.051	.908
Independence model	.161	.156	.165	.000

Estimates

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
SO	<---	MAS	.790	.138	5.726	***	par_1
OO	<---	FEM	.598	.096	6.205	***	par_2
SO	<---	MA	.138	.059	2.327	.020	par_47
SO	<---	HI	-.082	.076	-1.074	.283	par_48
OO	<---	CL	.044	.058	.750	.453	par_49
OO	<---	AD	.020	.065	.305	.761	par_50

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
SO	<---	MAS	.450
OO	<---	FEM	.630
SO	<---	MA	.161
SO	<---	HI	-.078
OO	<---	CL	.072
OO	<---	AD	.030

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
HI	<-->	MA	.473	.218	2.169	.030	par_3
HI	<-->	CL	1.477	.230	6.421	***	par_4
AD	<-->	CL	1.879	.263	7.138	***	par_5
AD	<-->	HI	.923	.213	4.341	***	par_6
AD	<-->	MA	1.779	.271	6.564	***	par_7
MA	<-->	CL	.183	.231	.792	.428	par_8
MAS	<-->	FEM	.281	.082	3.424	***	par_9
MAS	<-->	MA	.202	.126	1.604	.109	par_10
FEM	<-->	MA	-.041	.148	-.275	.784	par_11
MAS	<-->	HI	.254	.109	2.325	.020	par_12
FEM	<-->	CL	.601	.154	3.895	***	par_13
AD	<-->	MAS	.347	.120	2.895	.004	par_14
AD	<-->	FEM	.507	.151	3.361	***	par_15
MAS	<-->	CL	.412	.120	3.419	***	par_16
FEM	<-->	HI	.404	.136	2.982	.003	par_17

Correlations: (Group number 1 - Default model)

			Estimate
HI	<-->	MA	.166
HI	<-->	CL	.557
AD	<-->	CL	.667
AD	<-->	HI	.375
AD	<-->	MA	.590
MA	<-->	CL	.056
MAS	<-->	FEM	.276
MAS	<-->	MA	.119
FEM	<-->	MA	-.020
MAS	<-->	HI	.183
FEM	<-->	CL	.308
AD	<-->	MAS	.236
AD	<-->	FEM	.281
MAS	<-->	CL	.259
FEM	<-->	HI	.237

Appendix 11 Modification of the Initial Hypothesis Model

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 527
Number of distinct parameters to be estimated: 117
Degrees of freedom (527 - 117): 410

Result (Default model)

Minimum was achieved
Chi-square = 631.911
Degrees of freedom = 410
Probability level = .000

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	117	631.911	410	.000	1.541
Saturated model	527	.000	0		
Independence model	62	3766.153	465	.000	8.099

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.832	.810	.934	.924	.933
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.044	.037	.051	.916
Independence model	.161	.156	.165	.000

Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
SO	<---	MAS	.768	.135	5.693	***	par_1
OO	<---	FEM	.625	.096	6.509	***	par_2
SO	<---	MA	.130	.058	2.233	.026	par_47

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
SO	<---	MAS	.436
OO	<---	FEM	.662
SO	<---	MA	.151

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
HI	<-->	MA	.467	.218	2.141	.032	par_3
HI	<-->	CL	1.468	.230	6.389	***	par_4
AD	<-->	CL	1.879	.263	7.138	***	par_5
AD	<-->	HI	.915	.212	4.305	***	par_6
AD	<-->	MA	1.778	.271	6.561	***	par_7
MA	<-->	CL	.180	.231	.780	.436	par_8
MAS	<-->	FEM	.282	.082	3.436	***	par_9
MAS	<-->	MA	.203	.126	1.605	.109	par_10
FEM	<-->	MA	-.035	.148	-.239	.811	par_11
MAS	<-->	HI	.244	.108	2.251	.024	par_12
FEM	<-->	CL	.618	.155	3.993	***	par_13
AD	<-->	MAS	.347	.120	2.893	.004	par_14
AD	<-->	FEM	.520	.151	3.444	***	par_15
MAS	<-->	CL	.409	.120	3.399	***	par_16
FEM	<-->	HI	.401	.135	2.962	.003	par_17

Correlations: (Group number 1 - Default model)

			Estimate
HI	<-->	MA	.164
HI	<-->	CL	.553
AD	<-->	CL	.667
AD	<-->	HI	.372
AD	<-->	MA	.589
MA	<-->	CL	.055
MAS	<-->	FEM	.277
MAS	<-->	MA	.119
FEM	<-->	MA	-.017
MAS	<-->	HI	.176
FEM	<-->	CL	.317
AD	<-->	MAS	.236
AD	<-->	FEM	.288
MAS	<-->	CL	.257
FEM	<-->	HI	.235

Appendix 12 Modification of the initial Hypothesis Model – Eliminiation of Variables

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	76	354.666	199	.000	1.782
Saturated model	275	.000	0		
Independence model	44	2426.921	231	.000	10.506

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.854	.830	.930	.918	.929
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.053	.044	.062	.264
Independence model	.186	.179	.193	.000

Appendix 13 Design of an Alternative Model

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments:	527
Number of distinct parameters to be estimated:	126
Degrees of freedom (527 - 126):	401

Result (Default model)

Minimum was achieved
Chi-square = 603.693
Degrees of freedom = 401
Probability level = .000

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	126	603.693	401	.000	1.505
Saturated model	527	.000	0		
Independence model	62	3766.153	465	.000	8.099

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.840	.814	.940	.929	.939
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.043	.036	.050	.956
Independence model	.161	.156	.165	.000

Estimates

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
SO	<---	MAS	1.014	.153	6.641	***	par_1
OO	<---	FEM	.659	.108	6.118	***	par_2
SO	<---	MA	.100	.130	.770	.441	par_47
SO	<---	HI	.023	.105	.222	.824	par_48
SO	<---	CL	-.062	.169	-.367	.714	par_49
SO	<---	AD	.012	.219	.054	.957	par_50
OO	<---	MA	.033	.087	.379	.705	par_51
OO	<---	HI	.086	.071	1.222	.222	par_52
OO	<---	CL	.034	.112	.306	.759	par_53
OO	<---	AD	-.022	.146	-.149	.882	par_54
OO	<---	MAS	-.139	.087	-1.605	.108	par_55
SO	<---	FEM	-.461	.121	-3.797	***	par_56

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
SO	<---	MAS	.578
OO	<---	FEM	.683
SO	<---	MA	.118
SO	<---	HI	.022
SO	<---	CL	-.068
SO	<---	AD	.012
OO	<---	MA	.058
OO	<---	HI	.122
OO	<---	CL	.056
OO	<---	AD	-.033
OO	<---	MAS	-.118
SO	<---	FEM	-.320

Appendix 14 Modification of the Alternative Model

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	120	604.591	407	.000	1.485
Saturated model	527	.000	0		
Independence model	62	3766.153	465	.000	8.099

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.839	.817	.941	.932	.940
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.042	.035	.049	.973
Independence model	.161	.156	.165	.000

Estimates

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
SO	<---	MAS	.994	.149	6.676	***	par_1
OO	<---	FEM	.655	.103	6.342	***	par_2
SO	<---	MA	.111	.056	1.985	.047	par_47
OO	<---	HI	.110	.051	2.151	.031	par_48
OO	<---	MAS	-.128	.084	-1.518	.129	par_49
SO	<---	FEM	-.476	.112	-4.230	***	par_50

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
SO	<---	MAS	.567
OO	<---	FEM	.680
SO	<---	MA	.130
OO	<---	HI	.154
OO	<---	MAS	-.109
SO	<---	FEM	-.330

Appendix 15 Final Results Alternative Model

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	87	381.184	237	.000	1.608
Saturated model	324	.000	0		
Independence model	48	2601.181	276	.000	9.425

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.853	.829	.939	.928	.938
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.047	.038	.056	.706
Independence model	.175	.169	.181	.000

Appendix 16 Impact of Culture Type Variables on Communication Style Variables

Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
OO	<---	AD	.086	.148	.581	.561	par_7
SO	<---	MA	.210	.135	1.554	.120	par_23
OO	<---	HI	.126	.071	1.780	.075	par_24
OO	<---	MA	-.046	.087	-.535	.592	par_28
SO	<---	HI	.001	.105	.013	.990	par_29
SO	<---	CL	.054	.177	.307	.759	par_30
SO	<---	AD	-.093	.228	-.410	.682	par_31
OO	<---	CL	.042	.115	.365	.715	par_32

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
OO	<---	AD	.143
SO	<---	MA	.254
OO	<---	HI	.199
OO	<---	MA	-.090
SO	<---	HI	.001
SO	<---	CL	.061
SO	<---	AD	-.098
OO	<---	CL	.075

Appendix 17 Impact of Culture Type Variables on Communication Style Variables modified

Estimates

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
OO	<---	AD	.130	.068	1.914	.056	par_7
SO	<---	MA	.163	.060	2.694	.007	par_23
OO	<---	HI	.143	.059	2.421	.015	par_24
OO	<---	MA	-.070	.052	-1.360	.174	par_28

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
OO	<---	AD	.216
SO	<---	MA	.197
OO	<---	HI	.225
OO	<---	MA	-.136

Appendix 18 Impact of Culture Type Variables on Gender-Role Identity Variables - modified

Estimates

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
FEM <--- AD	.271	.079	3.458	***	par_25
MAS <--- CL	.132	.049	2.700	.007	par_26
FEM <--- MA	-.159	.058	-2.729	.006	par_27
MAS <--- MA	.050	.036	1.400	.161	par_32
MAS <--- HI	.017	.059	.281	.778	par_33
FEM <--- HI	.087	.062	1.406	.160	par_34

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
FEM <--- AD	.391
MAS <--- CL	.248
FEM <--- MA	-.264
MAS <--- MA	.102
MAS <--- HI	.027
FEM <--- HI	.117

L

Appendix 19 Supplementary Analyses – Mediator Model

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 496
Number of distinct parameters to be estimated: 95
Degrees of freedom (496 - 95): 401

Result (Default model)

Minimum was achieved
Chi-square = 613.081
Degrees of freedom = 401
Probability level = .000

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	95	613.081	401	.000	1.529
Saturated model	496	.000	0		
Independence model	31	3766.153	465	.000	8.099

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.837	.811	.937	.926	.936
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.044	.037	.051	.931
Independence model	.161	.156	.165	.000

Estimates

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
MAS	<---	AD	.023	.130	.179	.858	par_39
FEM	<---	AD	.276	.164	1.684	.092	par_41
MAS	<---	CL	.112	.101	1.110	.267	par_50
MAS	<---	HI	.021	.059	.357	.721	par_51
MAS	<---	MA	.036	.077	.469	.639	par_52
FEM	<---	MA	-.160	.096	-1.670	.095	par_53
FEM	<---	HI	.084	.071	1.178	.239	par_54
FEM	<---	CL	-.006	.123	-.046	.964	par_55
SO	<---	MA	.099	.129	.773	.440	par_37
SO	<---	MAS	1.015	.153	6.641	***	par_38
OO	<---	FEM	.662	.108	6.138	***	par_40
SO	<---	FEM	-.460	.121	-3.804	***	par_42
OO	<---	MA	.035	.086	.408	.683	par_43
SO	<---	HI	.021	.096	.218	.827	par_44
SO	<---	CL	-.064	.164	-.392	.695	par_45
SO	<---	AD	.014	.217	.066	.947	par_46
OO	<---	AD	-.023	.145	-.161	.872	par_47
OO	<---	CL	.039	.109	.359	.720	par_48
OO	<---	HI	.075	.065	1.165	.244	par_49
OO	<---	MAS	-.140	.087	-1.605	.108	par_56

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
MAS	<---	AD	.042
FEM	<---	AD	.404
MAS	<---	CL	.215
MAS	<---	HI	.036
MAS	<---	MA	.074
FEM	<---	MA	-.271
FEM	<---	HI	.118
FEM	<---	CL	-.009
SO	<---	MA	.117
SO	<---	MAS	.578
OO	<---	FEM	.685
SO	<---	FEM	-.319
OO	<---	MA	.061
SO	<---	HI	.020

			Estimate
SO	<---	CL	-.070
SO	<---	AD	.015
OO	<---	AD	-.035
OO	<---	CL	.064
OO	<---	HI	.109
OO	<---	MAS	-.119

Appendix 20 Single Analyses Impact of Organizational Culture on Communication Style mediated through Masculinity

Impact of Market Culture on Self-Orientation mediated through Masculinity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.000	.122	.000	.000	.000	.000	.000	.000
SO	.000	.143	.000	.000	.468	.000	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	...	.201	...	...	...	...	...	...
SO	...	.051	...	...	.023	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.000	.000	.000	.000	.000	.000	.000	.000
SO	.000	.057	.000	.000	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	...	...	...	...	...	...	...	...
SO	...	.209	...	...	...	...	...	...

Impact of Market Culture on Other-Orientation mediated through Masculinity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.000	.121	.000	.000	.000	.000	.000	.000
OO	.000	.059	.000	.000	.279	.000	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	...	.211	...	...	...	...	...	...
OO	...	.401	...	...	.095	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.000	.000	.000	.000	.000	.000	.000	.000
OO	.000	.034	.000	.000	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	...	...	...	...	...	...	...	...
OO	...	.121	...	...	...	...	...	...

Impact of Hierarchy Culture on Self-Orientation mediated through Masculinity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.158	.000	.000	.000	.000	.000	.000	.000
SO	.011	.000	.000	.000	.483	.000	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.050	...	...	...	...	...	...	...
SO	.838	...	...	...	.012	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.000	.000	.000	.000	.000	.000	.000	.000
SO	.076	.000	.000	.000	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	...	...	...	...	...	...	...	...
SO	.057	...	...	...	...	...	...	...

Impact of Hierarchy Culture on Other-Orientation mediated through Masculinity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.144	.000	.000	.000	.000	.000	.000	.000
OO	.259	.000	.000	.000	.216	.000	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.079	...	...	...	...	...	...	...
OO	.006	...	...	...	.184	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.000	.000	.000	.000	.000	.000	.000	.000
OO	.031	.000	.000	.000	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	...	...	...	...	...	...	...	...
OO	.063	...	...	...	...	...	...	...

Impact of Clan Culture on Self-Orientation mediated through Masculinity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.000	.000	.212	.000	.000	.000	.000	.000
SO	.000	.000	-.063	.000	.502	.000	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	...	...	.017	...	...	...	...	...
SO	...	...	.479	...	.023	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.000	.000	.000	.000	.000	.000	.000	.000
SO	.000	.000	.106	.000	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	...	...	...	...	...	...	...	...
SO	...	...	.012	...	...	...	...	...

Impact of Clan Culture on Other-Orientation mediated through Masculinity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.000	.000	.196	.000	.000	.000	.000	.000
OO	.000	.000	.229	.000	.208	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	...	...	...	...	...	...	...	...
OO	...	...	.093	...	...	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.000	.000	.000	.000	.000	.000	.000	.000
OO	.000	.000	.041	.000	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	...	...	...	...	...	...	...	...
OO	...	...	.093	...	...	...	...	...

Impact of Adhocracy Culture on Self-Orientation mediated through Masculinity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.000	.000	.000	.222	.000	.000	.000	.000
SO	.000	.000	.000	.038	.476	.000	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	...	...	...	.009	...	...	...	...
SO	...	...	...	.585	.020	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.000	.000	.000	.000	.000	.000	.000	.000
SO	.000	.000	.000	.106	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	...	...	...	...	...	...	...	...
SO	...	...	...	.005	...	...	...	...

Impact of Adhocracy Culture on Other-Orientation mediated through Masculinity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.000	.000	.000	.208	.000	.000	.000	.000

	HI	MA	CL	AD	MAS	OO	SO	FEM
OO	.000	.000	.000	.198	.228	.000	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	...	...	...	.020	...	...	...	...
OO	...	...	...	.016	.149	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	.000	.000	.000	.000	.000	.000	.000	.000
OO	.000	.000	.000	.047	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	MAS	OO	SO	FEM
MAS	...	...	...	...	...	...	...	...
OO	...	...	...	.056	...	...	...	...

Appendix 21 Single Analyses Impact of Organizational Culture on Communication Style mediated through Femininity

Impact of Market Culture on Self-Orientation mediated through Femininity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.000	-.028	.000	.000	.000	.000	.000	.000
SO	.000	.206	.000	.000	-.031	.000	.000	.000

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.000	.000	.000	.000	.000	.000	.000	.000
SO	.000	.001	.000	.000	.000	.000	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	...	.838	...	...	...	...	...	...
SO	...	.025	...	...	.572	...	...	...

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	...	...	...	...	...	...	...	...
SO	...	.532	...	...	...	...	...	...

Impact of Market Culture on Other-Orientation mediated through Femininity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.000	-.022	.000	.000	.000	.000	.000	.000
OO	.000	.078	.000	.000	.667	.000	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	...	.898	...	...	...	...	...	...
OO	...	.105	...	...	.030	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.000	.000	.000	.000	.000	.000	.000	.000
OO	.000	-.014	.000	.000	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	...	...	...	...	...	...	...	...
OO	...	.898	...	...	...	...	...	...

Impact of Hierarchy Culture on Self-Orientation mediated through Femininity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.201	.000	.000	.000	.000	.000	.000	.000
SO	.105	.000	.000	.000	-.052	.000	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.007	...	...	...	...	...	...	...
SO	.308	...	...	...	.497	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.000	.000	.000	.000	.000	.000	.000	.000
SO	-.010	.000	.000	.000	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	...	...	...	...	...	...	...	...
SO	.413	...	...	...	...	...	...	...

Impact of Hierarchy Culture on Other-Orientation mediated through Femininity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.208	.000	.000	.000	.000	.000	.000	.000
OO	.151	.000	.000	.000	.627	.000	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.009	...	...	...	...	...	...	...
OO	.071	...	...	...	.028	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.000	.000	.000	.000	.000	.000	.000	.000
OO	.130	.000	.000	.000	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	...	...	...	...	...	...	...	...
OO	.012	...	...	...	...	...	...	...

Impact of Clan Culture on Self-Orientation mediated through Femininity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.000	.000	.275	.000	.000	.000	.000	.000

	HI	MA	CL	AD	FEM	OO	SO	MAS
SO	.000	.000	.074	.000	-.056	.000	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	...	...	.006	...	...	...	...	...
SO	...	...	.411	...	.501	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.000	.000	.000	.000	.000	.000	.000	.000
SO	.000	.000	-.015	.000	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	...	...	...	...	...	...	...	...
SO	...	...	.389	...	...	...	...	...

Impact of Clan Culture on Other-Orientation mediated through Femininity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.000	.000	.276	.000	.000	.000	.000	.000
OO	.000	.000	.098	.000	.633	.000	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	...	...	.007	...	...	...	...	...
OO	...	...	.193	...	.026	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.000	.000	.000	.000	.000	.000	.000	.000
OO	.000	.000	.175	.000	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	...	...	...	...	...	...	...	...
OO	...	...	.009	...	...	...	...	...

Impact of Adhocracy Culture on Self-Orientation mediated through Femininity

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.000	.000	.000	.215	.000	.000	.000	.000
SO	.000	.000	.000	.171	-.074	.000	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	...	...	...	.005	...	...	...	...
SO	...	...	...	.029	.331	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.000	.000	.000	.000	.000	.000	.000	.000
SO	.000	.000	.000	-.016	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	...	...	...	...	...	...	...	...
SO	...	...	...	.216	...	...	...	...

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.000	.000	.000	.220	.000	.000	.000	.000
OO	.000	.000	.000	.107	.637	.000	.000	.000

Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	...	...	...	.003	...	...	...	...
OO	...	...	...	.074	.019	...	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	.000	.000	.000	.000	.000	.000	.000	.000
OO	.000	.000	.000	.140	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	OO	SO	MAS
FEM	...	...	...	...	...	...	...	...
OO	...	...	...	.006	...	...	...	...

Appendix 22 Mediated Model - modified

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	89	613.932	407	.000	1.508
Saturated model	496	.000	0		
Independence model	31	3766.153	465	.000	8.099

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.837	.814	.938	.928	.937
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.043	.036	.050	.955
Independence model	.161	.156	.165	.000

Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
MAS	<---	CL	.135	.038	3.572	***	par_39
FEM	<---	AD	.325	.074	4.401	***	par_40
FEM	<---	MA	-.189	.058	-3.241	.001	par_43
SO	<---	MA	.135	.058	2.350	.019	par_37
OO	<---	HI	.097	.048	2.010	.044	par_38
SO	<---	MAS	.764	.133	5.734	***	par_41
OO	<---	FEM	.590	.093	6.346	***	par_42

Standardized Regression Weights: (Group number 1 - Default model)

		Estimate
MAS	<--- CL	.257
FEM	<--- AD	.467
FEM	<--- MA	-.314
SO	<--- MA	.158
OO	<--- HI	.142
SO	<--- MAS	.438
OO	<--- FEM	.631

Standardized Direct Effects (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	MAS	OO	SO
FEM	.000	-.314	.000	.467	.000	.000	.000	.000
MAS	.000	.000	.257	.000	.000	.000	.000	.000
OO	.142	.000	.000	.000	.631	.000	.000	.000
SO	.000	.158	.000	.000	.000	.438	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	HI	MA	CL	AD	FEM	MAS	OO	SO
FEM	...	.007	...	.009	...	...	...	...
MAS	...	...	.012	...	...	...	...	...
OO	.102	...	...	...	.030	...	...	...
SO	...	.031	...	...	...	.014	...	...

Appendix 23 Final Mediator Model

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments:	435
Number of distinct parameters to be estimated:	73
Degrees of freedom (435 - 73):	362

Result (Default model)

Minimum was achieved
Chi-square = 592.737
Degrees of freedom = 362
Probability level = .000

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	73	592.737	362	.000	1.637
Saturated model	435	.000	0		
Independence model	29	3485.578	406	.000	8.585

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.830	.809	.926	.916	.925
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.048	.041	.055	.663
Independence model	.166	.161	.171	.000

Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
FEM	<---	AD	.332	.074	4.483	***	par_31
MAS	<---	CL	.138	.038	3.607	***	par_32
FEM	<---	MA	-.192	.058	-3.305	***	par_33
SO	<---	MAS	.765	.129	5.931	***	par_1
OO	<---	FEM	.629	.096	6.541	***	par_2
SO	<---	MA	.156	.054	2.876	.004	par_29

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
FEM	<---	AD	.478
MAS	<---	CL	.260
FEM	<---	MA	-.321
SO	<---	MAS	.474
OO	<---	FEM	.665
SO	<---	MA	.197

Standardized Direct Effects (Group number 1 - Default model)

	MA	CL	AD	FEM	MAS	OO	SO
FEM	-.321	.000	.478	.000	.000	.000	.000
MAS	.000	.260	.000	.000	.000	.000	.000
OO	.000	.000	.000	.665	.000	.000	.000
SO	.197	.000	.000	.000	.474	.000	.000

Standardized Direct Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	MA	CL	AD	FEM	MAS	OO	SO
FEM	.007	...	.006	...	...	...	...
MAS	...	.009	...	...	...	...	...
OO	...	...	...	.025	...	...	...
SO	.032	...	...	...	.013	...	...

Standardized Indirect Effects (Group number 1 - Default model)

	MA	CL	AD	FEM	MAS	OO	SO
FEM	.000	.000	.000	.000	.000	.000	.000
MAS	.000	.000	.000	.000	.000	.000	.000
OO	-.213	.000	.318	.000	.000	.000	.000
SO	.000	.123	.000	.000	.000	.000	.000

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	MA	CL	AD	FEM	MAS	OO	SO
FEM	...	...	...	...	...	...	...
MAS	...	...	...	...	...	...	...
OO	.010	...	.008	...	...	...	...
SO	...	.005	...	...	...	...	...