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The Emotional Valley: A Process Perspective on Failed and Successful Online Negotiations

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I) Introduction

Electronic negotiations are becoming increasingly important in today's digitalized world. Negotiation success can be managed by properly dealing with emotions, as they possess an influential character on human, social behavior (Thompson 1990; Miller and Leary 1992; Izard 1993; Parkinson 1996; Keltner and Buswell 1997; Forgas and George 2001; Kelly and Barsade 2001). Research in this field, however, mainly considers emotions as static antecedence, or outcome variables, disregarding their dynamic character and continuous influence on the whole negotiation process (Homans 1974; Carnevale and Isen 1986; Frijda 1986; Sutton and Rafaeli 1988; Berkowitz 1989; Kumar 1997). In order to meet the challenges predisposed by the context of electronic negotiations, a more detailed understanding about the negotiation process itself is unavoidable. Therefore we need to identify the distinct negotiation phases, which altogether define a whole negotiation. In line with Phase Model Theory (Douglas 1962; Gulliver 1979; Holmes 1992) we are able to relate negotiation phases to specific emotional behavior. Furthermore, negotiators' utility functions are used to refine the insights about the procedural character of negotiations. In the present work, we used multi-dimensional scaling to identify three dimensions (pleasure vs. displeasure, solidarity vs. conflict, and other- vs. self-oriented behavior), which further allow us to define distinct negotiation processes. By doing so, we are able to relate negotiation success and failure, to specific combinations of emotional characteristics. Both, successful and failed negotiations are characterized by an initial decrease of emotional positive expressions. For successful negotiations, we however observe a simultaneous increase of solidarity, as contrasted by failed negotiations. Ultimately, negotiations in which an agreement was reached are characterized by a final increase of positive emotions. We denominated this emotional pattern inherent to successful negotiations "emotional valley".

A) The Importance of Emotions in Negotiations

Emotions are dumb and should be hated. (Bender, Futurama)

In negotiation research very little emphasis has been placed on emotions and their influential character regarding the (inter)-relational bargaining process of negotiations. Researchers adept at this topic criticize that the role of emotions is empirically as well as theoretically underdeveloped (Gibbons, Bradac et al. 1992; Morris and Keltner 2000; Thompson and Kim 2000; Barry and Fulmer 2005; Kopelman, Rosette et al. 2006), and that yet only a limited amount of studies begin to build a full understanding of the complex interplay of emotions and negotiations (Hegtvedt and Killian 1999). However, in recent years sensitivity for this issue increased, which helps us to develop a more complete picture of this topic today.

Emotion often is referred to as variable of individual difference (Thompson 1990; Barry and Oliver 1996; Bazerman, Curhan et al. 2000) and hence is a notorious source of complexity. Because our knowledge of the role emotions play in negotiations is still rather limited, ambivalent views and concepts can be found throughout literature (Allred, Mallozzi et al. 1997; Kumar 1997; Barry and Fulmer 2005). However, despite the still general view that the effect of emotions, if considered at all, is negative (Kumar 1997; Adler, Rosen et al. 1998; Schroth, Bain-Chekal et al. 2005), some researchers have started to contemplate that emotions as well as cognitive processes may influence the negotiation process as a whole both positively and negatively (O'Connor, De Dreu et al. 2002; Schroth, Bain-Chekal et al. 2005). There is evidence, for example, that emotions actually are evoked by specific trigger phrases or words and that certain pieces of information are encoded in and transmitted by emotions (Adler, Rosen et al. 1998; Schroth, Bain-Chekal et al. 2005).

By considering similar research conducted in other social science disciplines, e.g. the analysis of non-verbal communication in face-to-face (FtF) interactions (Bavelas, Black et al. 1986; Gibbons, Bradac et al. 1992), it becomes obvious that emotions may play a vital role in almost any kind of inter-personal communication and relationship.

Negotiations as dynamic and vital situations of interaction introduce and define various kinds of relational processes or action tendencies, and at the same time are structured or altered by such factors, both from within and form outside (Allred, Mallozzi et al. 1997; Hegtvedt and Killian 1999). Emotions are one important category of influential variables and should not be underestimated in this process of exchange of inter-dependencies (Scherer 1986; Kelly and Barsade 2001). Even considerably weak emotional reactions can trigger misunderstandings and finally may have a huge impact on the negotiation context and process (Allred, Mallozzi et al. 1997; Adler, Rosen et al. 1998; Barry and Fulmer 2005).

Since we know to date that emotions may play a significant role in the context of negotiations, our work will contribute to current research and supplement it by introducing a process based view of emotions, in line with phase model theory. The upcoming chapters provide an overview of how emotions influence a negotiator as well as his decisions and actions taken, to highlight why it is important to deal with and consider emotions by all means.

A.1) Emotions do matter

After all, emotions are what give vitality to the values and goals that negotiators bring to the table. (Adler, Rosen et al. 1998)

The traditional conceptualization of negotiations as simple, rational process is being questioned and criticized by social scientists (Thompson 1990; Forgas 1998) as being too restrictive. They argue that it denies or leaves out several important characteristics, such as emotion. Also negotiations often have only been analyzed using rationality bound and strictly mathematical techniques (e.g. game theory), thus underestimating important facets of negotiations such as its dynamic rather than formal and systematic procedural context (Obeidi, Hipel et al. 2005). It is important to note that emotions in a negotiation situation are process variables. They evolve or change within the situation and are continually re-evaluated by the negotiating parties. Hence emotions are a dynamic and temporal force of constant

interference within the negotiation context (Levenson and Gottman 1983; Scherer 1986; Eibl-Eibesfeldt 1989; Keltner and Buswell 1997; Morris and Keltner 2000). Emotions significantly affect our lives in a lot of different, sometimes not quite understandable ways. Accordingly they are considered as having a general influential character on human behavior (Izard 1993; Parkinson 1996; Forgas and George 2001; Kelly and Barsade 2001).

Similar to emotions, negotiations as a way of dealing with conflict are too an inherent part of human life (Obeidi, Hipel et al. 2005). This is because negotiations typically are a form of (relational) social behavior and interaction, between individuals or groups (Thompson 1990; Miller and Leary 1992; Keltner and Buswell 1997). Negotiations thus cannot be considered as a strictly rational process because of several human characteristics inherent to them, such as irrationality, opportunistic behavior or emotional reactions. Accordingly there exists a natural interdependence between emotions and negotiations, which needs to be considered (Clark 1992; Barry and Oliver 1996; Barry and Fulmer 2005; Butt, Choi et al. 2005).

In order to be able to better understand this interdependence it is critical for negotiation researchers to consider the dynamic interplay of cognitive and psychological processes. Personal variables of difference and contextual causal factors for example, can be a basis to develop an understanding of the complex process of a negotiation. Furthermore emotions, both positive and negative, as inherent part of a negotiation, exert a sometimes even dominating influence on all levels of the negotiation process. (Carver and Scheir 1990; Forgas, Bower et al. 1990; Thompson 1990; Izard 1993; Barry and Oliver 1996; Forgas and Fiedler 1996; Kumar 1997; Forgas 1998; Anderson and Thompson 2004; Barry and Fulmer 2005; Butt, Choi et al. 2005; Obeidi, Hipel et al. 2005).

Emotions furthermore have informational character and convey important meaning about its sender and the contextual environment. This is a significant point as emotions are almost omnipresent in every level and stage of interaction. Generally negotiation situations are characterized by a lack of information for negotiating parties, information that would be needed to make accurate decisions. This restriction is (implicitly) compensated by other information valuable to the

negotiator, like his own judgment of the situation, which is finally influenced or even based on emotional evaluations of the situational context, the negotiation partner, and the issues under negotiation (Thompson 1990; Mineka and Cook 1993; Parkinson 1996). But emotions not only serve as substitute of missing information, they also provide additional information about its sender and his intensions, his beliefs, his current mood and his emotions (Scherer 1986; Ekman 1993; Mineka and Cook 1993; Scherer, Schorr et al. 2001), as well as his attitudes towards the negotiation situation, respectively the relationship with the negotiation partner (Knutson 1996; Ekman 1999).

Emotions in the dynamic and relational context of negotiations thus are constantly evolving and being re-evaluated by all actors involved. It is interesting that emotion as "relationship builder" influences the reach of a negotiation goal, helps us to communicate our identity to a negotiation partner, may serve to repair damaged relationships, or even may provoke to stay in a relationship that leads to obvious material or economical loss in the short run (Hegtvedt and Killian 1999; Allred 2000; Shapiro 2002). Problems due to the relational character of negotiations connected with uncertainties about the other party and about the current situation, often arise out of the desire to protect oneself from opportunistic behavior and loss of time, money or reputation. Such a situation of uncertainty, which is a situation lacking important information, can be dealt with by using ones' judgment. Personal judgment is strongly inter-connected with emotions, hence emotions serve as substitute for crucial and missing information to overcome a possible deadlock that may develop due to relational tensions produced by competitive versus cooperative moves (Allred 2000; Morris and Keltner 2000; Shapiro 2002). Our sense of justice also impacts the relationship building process and thus the negotiation, because justice is a collection or cultivated set of emotions, serving as guideline for our feeling of right and wrong (Solomon 1989). Although emotional expressions only appear for a short momentum and are quickly followed by another expression, emotional expressions serve negotiators to draw conclusions about the sender of an emotion by almost instantly detecting and analyzing the piece of information retrieved (Morris and Keltner 2000). Thus emotions may help to form a stronger and more positive relationship between two negotiating parties, which may finally result in positive affect for each other, and

ultimately foster future commitment (Lawler and Yoon 1993; Hegtvedt and Killian 1999).

The fact that emotions are simply inescapable should alarm negotiators (Shapiro 2002; Shapiro 2006) and make them more aware that a proper way of dealing with emotions not only provides a competitive advantage, but also helps to avoid unnecessary errors and problems. In crisis and conflict situations and negotiations (e.g. hostage negotiations), the detection of specific emotions, especially emotional arousal, is considered one of the most important first steps, since a correct determination of emotions reveals important information about the situation and helps negotiators to develop a "guideline" a for a successful and positive resolution of a crisis situation (Gibbons, Bradac et al. 1992; Rogan and Hammer 1995; Obeidi, Hipel et al. 2005).

Thus we note that emotions convey and provide all kinds of different information and meaning. By analyzing and interpreting affect accordingly and within context we may be able to "document" any chosen course of negotiations for further analysis.

A.1.1) Positives and negatives of emotion

After emphasizing general qualities of affect, it makes sense to analyze positives as well as negatives connected with emotions in a negotiation setting to obtain a better general understanding of this complex phenomenon.

It is useful to be aware of this broader out of the box viewpoint, so that one not solely focuses on a point to point analysis, disregarding the inter-connections between all single pieces of this inter-relational "emotional puzzle". When focusing for instance on one negotiator, the opponents emotions on one hand can and will trigger several (re)actions. On the other hand emotions originate from the negotiator himself, initiating (re)actions themselves, which finally can be seen as a tactical gambit employed by this negotiator.

A.1.1.1) Positives of emotion

When analyzing positive factors connected with emotions, it is important to understand that positive as well as negative emotions can have positive consequences and effects. Thus, we will first discuss positives connected with positive emotions, and then address positives connected with negative emotions.

Very generally spoken, positive emotions positively influence the decision making process as a whole, induce positive attitudes and feelings towards opponents, and increase the persistence of the relationship (Kumar 1997).

Specifically, positive emotions: Motivate and provide values (Adler, Rosen et al. 1998), serve as signal for others about own intentions and hence give useful feedback and may reduce hostile behavior (Kumar 1997; Adler, Rosen et al. 1998), lead to more cooperative behavior fostering better win-win outcomes and promoting joint gains (Barry and Oliver 1996; Kumar 1997; Anderson and Thompson 2004), facilitate integrative solutions and agreements because they affect own perceptions of others' possible planned strategies and others' interests as well as overall concession making behavior (Isen and Daubman 1984; Carnevale and Isen 1986; Isen, Daubman et al. 1987; Barry and Oliver 1996; Allred, Mallozzi et al. 1997; Kumar 1997; Forgas 1998; Anderson and Thompson 2004), induce innovative thinking that leads to more innovative problem solving strategies which finally result in more innovative solutions (Isen and Daubman 1984; Carnevale and Isen 1986; Isen, Daubman et al. 1987), allow for better and more flexible cognitive processing that increases overall creativity and helps to avoid possible deadlocks such as escalating commitment (Carnevale and Isen 1986; Isen, Daubman et al. 1987; Anderson and Thompson 2004), help to develop and build relational commitment as well as confidence which results in higher possible outcomes (Kramer, Pommerenke et al. 1993; Lawler and Yoon 1993), and finally may also help to alter negotiators expectations positively, concerning the process as well as the opponent (Kumar 1997).

Moreover positive emotions will also lead to an increase in trust of negotiators. Increased trust in the negotiation situation, the negotiation partner, or the possibility of fair and good outcomes for example, will lead to more honesty in the

process and thus a better, more open, and more cooperative negotiation setting, since more information will be shared, supporting negotiators to reach better, and more integrative agreements (Carnevale and Isen 1986; Thompson 1990; Anderson and Thompson 2004). Therefore, trust is very important when it comes to situations that are mainly defined by uncertainties, like negotiation situations, simply because trust is a risk coping strategy.

Finally positive emotions and the power of a negotiator share strong bonds. Powerful negotiators can moderate mistrust in negotiation situations by displaying positive emotions, which can be an influential signal to less powerful negotiators for example (Anderson and Thompson 2004). Less powerful negotiators accordingly respond to signals sent by their more powerful opponents, and constantly look for such. They are doing so because they are more vulnerable and consequently more concerned about outcomes as well as more anxious in general. They interpret positive emotions as indicators of trustworthiness and, depending on the power difference, can be highly responsive to positive emotions displayed by others (Anderson and Thompson 2004).

Additionally to positive emotions, negative emotions can sometimes also be useful and positively beneficiary. This is an essential and crucial point because we are most likely tempted to oversee or ignore this fact. Negative emotions for instance imply and transmit different useful kinds of information, bear several motivational functions, or even strengthen an existing relationship (Kumar 1997). Anger and fear for example, as one of the strongest and most common negative emotions, can be of positive use because they may help to restore and solve a situation of crisis, but only under the constraint of high power difference between opponents. The less powerful partner has to respond positively to his opponent and to obey, similarly to a mother-child relationship (Morris and Keltner 2000). Anger also positively affects the possibility of resolutions, especially when the party experiencing anger has more to lose without a reached agreement than his opponent (Friedman, Anderson et al. 2004). Furthermore, by expressing anger one may also communicate that the issue under negotiation is of high importance (Morris and Keltner 2000). A display of embarrassment and shame can have positive effects as these emotions may serve as apology or conciliation gesture, helping to repair and restore damaged relationships (Keltner and Buswell 1997;

Morris and Keltner 2000). Also, feelings of guilt can help to restore or maintain a relationship because they drive individuals to overcome strong self-interested behavior and motivate them to adopt a more cooperative and integrative attitude (Morris and Keltner 2000). Expressions of pain and distress may likewise impel people to adopt more cooperative strategies, especially when expressed because of, or right after a situation of unfair behavior (Eisenberg, Fabes et al. 1989; Morris and Keltner 2000). Finally, jealousy is also considered a factor that helps to preserve relationships, as feelings of jealousy lower interest in others than the current negotiation partner, which ultimately leads to more commitment to the ongoing relationship (Morris and Keltner 2000).

Concluding we see that emotions not only positively touch our lives in a vast variety of ways, but also that negative emotional characteristics actually can have positive outcomes and effects on individuals, but also on a relationship as a whole, respectively a negotiation.

A.1.1.2) Negatives of emotion

Paralleling the findings of positives of emotions, negative factors linked with emotions may also be connected with either positive or negative emotions.

Negatives of positive emotions may have far more, and far stronger consequences than we might actually be aware of. The Dollar auction exercise, a popular negotiation example, for instance demonstrates that intense emotions may quickly lead to irrational behavior (Adler, Rosen et al. 1998). Emotions at the beginning of the game are mainly positive, as individuals look forward to future gains. Once trapped in the bidding process, they then may realize their irrational actions. Hence this example illustrates that positive emotions might corrupt our overall perceived objectiveness, introducing a perception trap (Adler, Rosen et al. 1998). Judgments usually are biased, and of course positive emotions play a significant role in this process (Thompson 1990). Negotiators thus should be aware of a negotiator's bias, which holds that negotiators tend to regard themselves as always

honest and fair (Adler, Rosen et al. 1998). Although this bias is also associated with negative emotions, it is stronger and more persistent within the sphere of positive emotions (Thompson 1990; Adler, Rosen et al. 1998). Similarly, intrapersonal positive emotions form a self-enhancement bias that finally makes people ignore critical feedback from others, which could possibly lower self-esteem (Thompson 1990; Adler, Rosen et al. 1998). This is problematic because positive affect hence renders individuals to cultivate self-esteem, which might get out of hand, lead to overconfidence and an inappropriately positive self-evaluation. Also people in good mood tend to view themselves as better than others, thus lowering their expectations about opponents, which results in less cooperative behavior. Moreover, high self-esteem, due to good mood, provokes individuals to overvalue their performance, and to focus more on positive criticism. Finally, negotiators in positive mood misjudge their power of control and over-estimate their possible control of specific situations, as well as expectations of possible outcomes (Kramer, Newton et al. 1993; Barry and Oliver 1996; Kumar 1997). However, Forgas and Bower (1987) state that positive mood also leads to a more positive assessment of others, which could finally compensate for the negative evaluation of an opponent due to the self-enhancement bias.

Moving on, also emotional ties may manipulate a negotiation, because strong positive emotional ties foster high positive expectations, which might be impossible to satisfy (Barry and Oliver 1996). Similarly power imbalance also shapes a negotiation, as positive affect of more powerful negotiators gives more structure to the negotiation than that of less powerful negotiators. The result of this imbalance is a clear reflection of power balance in the negotiation process, which may induce opponents to focus less on integrative, and more on distributive strategies (Faley and Tedeschi 1971; Anderson and Thompson 2004). Furthermore Kumar (1997) states why negotiators should always try to scrutinize behavior co-determined by positive affect. So do positive affective states induce people to accept weak and strong arguments equally, whereas individuals experiencing negative affect only tend to accept stronger arguments, which means that positive affective states deter people from questioning weak arguments. People influenced by positive affect are likely to view the world as more kind, pleasant, and less dangerous than others, and hence do not feel the need for

critically analyzing different situations. Additionally, positive affect may interfere with a negotiators' tactic of positioning oneself as a tough bargainer, or even distract from a task at hand by focusing ones concentration mainly on the affective state, rather than the negotiation process.

The study of negatives of negative emotions focuses mainly on the analysis of anger as general representative factor, mainly because anger is one of the strongest negative emotions and therefore naturally easier to locate and analyze than weaker forms of negative emotions. Frustration for example may only lead to motivations to maybe seek revenge at some point, but anger may be shown immediately and can even lead to physical aggressiveness at a very extreme level. Another example is fear, which can leave an individual "frozen", unable to interact with an opponent in any way. However, fear is often hidden by displaying anger, to overcome such a "freezing effect" (Obeidi, Hipel et al. 2005). Generally, negotiations defined by negative emotions signal that negotiation partners don't interrelate very well. Also, negative emotions develop a dynamic, self-supporting, and reinforcing effect, influencing judgments about the whole situation (Kumar 1997). Respectively, conflicts shaped by negative emotions evoke the perception that the opponents actions may interfere with ones own goals, which finally may generate even more negative affect (Obeidi, Hipel et al. 2005).

Using anger as a representative example of negative emotions, we will discuss effects connected to it first on an intrapersonal level and then on an interpersonal level, for ease understanding. High levels of intrapersonal anger indicate that people are less aware about their aggressive behavior and its consequences (Berkowitz 1989), may tempt people to lose ones temper and restraint (Friedman, Anderson et al. 2004), reduces ones respect and appreciation for the opponent as well as his interests (Allred, Mallozzi et al. 1997), lead to an increase in the use of distributive strategies and tactics (Olekalns and Smith 2003), and finally may result in less positively closed deals (Pillutla and Murnighan 1996). Additionally, interpersonal forms of anger damage ones positive evaluations about an opponent and the negotiation as a whole (Van Kleef, De Dreu et al. 2004a), worsen relational ties and damage the relationship by eliciting fear in an opponent, which may lead to lower joint gains and a higher offer-rejection and thus negotiation impasse rate (Allred, Mallozzi et al. 1997; Moore, Kurtzberg et al. 1999; Morris and Keltner

2000; Friedman, Anderson et al. 2004). Therefore anger reduces the possibility of mutual agreements, as the reciprocal effect of anger tends to "spread" negative emotions (Rothbart and Hallmark 1988; Allred, Mallozzi et al. 1997; Friedman, Anderson et al. 2004; Van Kleef, De Dreu et al. 2004a). This is quite likely, because perceived anger is also perceived as dominant behavior (Tiedens 2001) or arrogance (Friedman, Anderson et al. 2004), which are factors that easily evoke anger, especially when people believe that the other party is responsible for bad outcomes (Smith and Ellsworth 1985). Also, anger reduces the motivation of parties to work together and solve disputes, and at the same time increases the motivation to focus more on negative actions, such as revenge, instead of possible ways to solve problems (Pillutla and Murnighan 1996; Ross, Fischer et al. 1997; Thompson and Kim 2000).

A.2) Emotions and Negotiations: Different Approaches

To date several different perspectives incorporating emotions and negotiations exist. The first theorists who paid attention to this connection observed social consequences in negotiations due to emotional reactions, relying mainly on experiments conducted in psychology and game theoretic analysis. Later research focused on cognitive analysis (Bazerman and Neale 1982; Neale and Bazerman 1991), or on the research of emotional expressions (Sutton and Rafaeli 1988; Rafaeli and Sutton 1991), and laid the ground for future theoretical and empirical analysis resulting in mainly three different approaches we deal with today: Emotion as predictor of specific behavior, emotion as experienced consequence, and emotion as tactical value (Morris and Keltner 2000). These three approaches coexist homogenously, every one of them addressing specific important issues, as researchers are still trying to find a consensus or unique approach to incorporate every single significant factor of emotion.

Recent research conducted, both theoretical (Barry and Oliver 1996; Kumar 1997) and empirical (Allred, Mallozzi et al. 1997; Thompson and Kim 2000; Conlon and

Hunt 2002; Van Kleef, De Dreu et al. 2004a), addresses the lack of scientific understanding of the role of emotions in negotiations, and as Obeidi, Hipel et al. (2005) put it, "it is impossible to understand social integration and confrontation phenomena, unless emotions are understood".

A.2.1) Emotions as predictor and cause of specific behavior

A major characteristic of emotions is that they may draw attention to specific pieces of information or to specific situational aspects (Hegtvedt and Killian 1999).

Frijda (1986) observed that emotions constitute "action tendencies" resulting in distinct behavioral (re)actions. Also Carnevale and Isen (1986), Sutton and Rafaeli (1988), and Berkowitz (1989) confirm this direct connection between emotions and different forms of behavior. More recent research backs these studies, acknowledging the effect emotions have on choices people make, and hence on their behavioral orientations (Roseman, Spindel et al. 1990; Keltner, Locke et al. 1993; Kramer, Newton et al. 1993; Allred, Mallozzi et al. 1997; Kumar 1997; Forgas 1998; Lerner and Keltner 2000; Lerner and Keltner 2001; Loewenstein, Weber et al. 2001; Obeidi, Hipel et al. 2005).

Researchers investigating this relationship point out that emotional states of negotiation partners can be used to predict outcomes of the ongoing negotiation. It is important to consider that emotions are stronger and more focused than general moods and hence are likely to have a greater influence on the negotiation process (Carnevale and Isen 1986; Allred, Mallozzi et al. 1997). However, the influential character of moods may be considered as longer lasting.

One recent study for example, provides proof for this statement by showing that the negotiation outcome is directly effected by the negotiators emotions (Butt, Choi et al. 2005). It is argued that the prediction of negotiation outcomes is possible because emotions allow negotiators to predict a number of important "perceptual, cognitive, and behavioral processes including social perceptions,

judgments and choice, and communication and information processing" (Butt, Choi et al. 2005).

A person's general affective state can be considered an individual contextual setting, framing and influencing individual actions. This affective state hence parallels positive and negative emotions, and congruently influences a negotiator's strategies and plans, as well as his expectations and thoughts, which are factors that influence the outcome and other final consequences for a negotiator (Lanzetta and Englis 1989; Thompson 1990; Barry and Oliver 1996; Forgas 1998).

The effect of positive and negative affect on peoples behavior, on their use of information, on how they interpret a situation, as well as on other significant processes guiding them in responding to or dealing with a specific situation, have been well documented (Carnevale and Isen 1986; Kramer, Newton et al. 1993; Forgas 1998). Positive affect drives people to be more helpful and more cooperative, to show more concern for others, to act and react more flexible, altruistic and optimistic, to be more willing to concede and solve problems by showing less hostile and angry behavior, and finally to solve problems more creatively and less competitively (Fiedler 1991; Forgas 1995; Forgas and Fiedler 1996; Forgas 1998; Rhoades, Arnold et al. 2001; Schroth, Bain-Chekal et al. 2005). Negative affect on the other hand leads to more competitive behavior and significantly affects people in being and acting more self-centered, less flexible, less optimistic, less cooperatively creative and less helpful (Deutsch 1977; Allred, Mallozzi et al. 1997; Ross, Fischer et al. 1997; Forgas 1998; Allred 2000; Rhoades, Arnold et al. 2001; Schroth, Bain-Chekal et al. 2005).

Van Kleef, De Dreu et al. (2004a), and Friedman, Anderson et al. (2004) for example, show that actions of negotiation partners are highly influenced by anger. The result is a chain reaction that impacts the whole outcome of a negotiation. Research on this phenomenon has not yet received much attention, especially the analysis of language and specific words, which can be an indicator for a person's affective state (Schroth, Bain-Chekal et al. 2005).

Although empirical research in this field generally has not come very far yet, one consequence of affect has been discussed more intensively. This consequence is the affective influence on two cognitive processes, more precisely the effect on

informational effects and processing effects (Isen, Daubman et al. 1987; Mayer, Gaschke et al. 1992; Forgas 1995; Sedikides 1995; Forgas 1998). This dependence is reflected and explained by the Affect Infusion Model (AIM), which states that affect influences a person's judgment and the way one thinks and processes information, especially in a cooperative atmosphere (Forgas 1995; Sedikides 1995; Forgas 1998). Thus, there is clear evidence that the overall negotiation atmosphere is predisposed by individual emotional experiences of negotiation partners. These experiences are constantly evolving due to the process character of negotiations and its predetermination of emotions (Kumar 1997).

Moreover the inherent process character of emotions as well as of negotiations consequently yields relational development between the negotiating parties over time (Lawler and Yoon 1993; Barry and Fulmer 2005). Relationship building (positive or negative) is very likely because emotions have a strong effect on others and their behavior especially in an interpersonal negotiation situation (Wiggins 1979; Barsade 2002; Van Kleef, De Dreu et al. 2004b; Butt, Choi et al. 2005). The evolving relationship naturally can be a positive as well as a negative one, as intense emotions especially at the beginning of the encounter, may trigger all kinds of (sometimes irrational) behavior (Allred, Mallozzi et al. 1997; Adler, Rosen et al. 1998).

Lazarus (2001) states that specific negotiation behavior is triggered by emotions. Thus affect generates a behavioral orientation towards someone else, which results in the construction of relational meaning. Allred, Mallozzi et al. (1997) termed the influence of emotion, or what people feel towards each other, "emotional regard", and pointed out that this important cornerstone of a relationship finally influences the possibility of good and integrative outcomes.

Furthermore emotions and emotional reactions transmit specific information, and help an opponent to interpret the situation and react accordingly (Van Kleef, De Dreu et al. 2004b). Emotions might for example be used to display ones status as dominant character, or to communicate ones utility set or preferences to the other party (Parkinson 1996; Morris and Keltner 2000).

What may become obvious at this point is that emotions clearly are a social phenomenon in negotiations and synchronize the reciprocal exchange of

emotional information. Emotions other people show, do not only influence our actions but also our feelings and therefore help to establish a social process that initiates a dynamic spiral effect of emotional interchange. This concept comprises the assumption that emotions are not easily ignored and therefore people usually feel the need to respond to other peoples' emotions. Experienced emotions, however, do not constitute an absolute and unlimited influence on the negotiation context. So are situations of high involvement rather dictated by the situation itself than by the persons emotions operating in its context (Parkinson 1996).

Overall, because affect is so omnipresent in negotiation situations and often also arises quickly and directly due to the situation of interaction rather than due to negotiators' intentions, affect should not simply be considered as just one influential variable among others, but as heaving a "priming effect" (Barry and Fulmer 2005) on information processing and finally on the negotiation context.

Emotions furthermore work as relational and behavioral incentives (Tronick 1989; Morris and Keltner 2000). Barry and Oliver (1996) explain and sum up processes, consequences, and outcomes of emotional actions and states (Johnson and Tversky 1983; Isen and Daubman 1984; Isen 1985; Carnevale and Isen 1986; Isen, Daubman et al. 1987; Loewenstein, Thompson et al. 1989) including, "creativity and problem solving, cognitive organization and categorization, information encoding and retrieval, cooperative and helping behavior, problem-solving strategies, perceptions of self-efficacy, risk-taking behavior, utility functions and equity norms, and levels of aggression" (Barry and Oliver 1996). Obeidi, Hipel et al. (2005) also give an overview of factors determined by emotions, such as the conceptualization of events, a person's attention and beliefs, the (re)arrangement of priorities and goal hierarchies, and the strength of commitment.

Because there are numerous factors and processes interconnected with affect, the danger of emotions leading to negative outcomes is ubiquitous. This problem is very well demonstrated by Adler, Rosen et al. (1998). The authors state that especially anger and fear are emotions affecting a negotiation situation dramatically. Therefore, they postulate that it is imperative to prepare and take steps to keep the situation under control and to be ready to apply essential changes to a situation if necessary, in order to finally achieve productive and

positive outcomes. Affect hence impacts economic outcomes (Carnevale and Isen 1986; Isen, Daubman et al. 1987; Barry and Oliver 1996) and should be of high interest to every negotiator.

Until recently though, emotions and their influence were not considered in the analysis of conflict situations and the preparation for future negotiations. Obeidi, Hipel et al. (2005) among the first to address this problem, for example developed a framework focused on the centrality of emotions in conflict situations, called "Appraisal Theory of Activation of Emotion" (Obeidi, Hipel et al. 2005).

A.2.2) Emotions as experienced consequence

Other people are one of the most common causes of emotion. (Brian Parkinson)

In negotiation situations emotions not only trigger certain (re)actions, they naturally also are consequences. Kumar (1997) for example investigated possible origins of affect and argues that these can basically be divided into three subgroups, being the image one person has of another, perceived justice concerning distributional as well as procedural factors of the negotiation, and possible divergences due to cultural issues.

(In)Justice quickly and easily leads to emotional reactions (Homans 1974), as can be observed in everyday life-situations. There certainly are numerous origins of (in)justice, differing from situation to situation (Lawler and Yoon 1993; Hegtvedt and Killian 1999). Moreover, not only obvious situations of (in)justice trigger emotions, also subjective perceived (in)justice does (Homans 1974). Therefore it is important to analyze each situation of (in)justice to be able to differentiate and understand emotions evoked in specific stages of a negotiation (Hegtvedt and Killian 1999).

The image one negotiator has of another also affects emotional (re)actions and is formed by a number of individual personal variables such as sex, status, power or group membership, by past experiences and memories, as well as by the present

situation of interaction (Hegtvedt and Killian 1999). Because there are numerous different impacts on the individual sphere of a negotiator that might serve as possible emotion-triggers, most theorists argue that each person implicitly and constantly analyzes every part of a situation for social cues, which serve as tools for internally constructing "emotional experiences" (Lawler and Yoon 1993; Parkinson 1996; Hegtvedt and Killian 1999). As the present work is based on the analysis of emotions in a negotiation situation it is essential to not only analyze emotions within the individual sphere of a negotiator but also within the whole context of interaction. Therefore a researcher's interest in this field should also be focused on how the expression of emotions will influence emotional reactions of others (Morris and Keltner 2000).

Proof for this inter-relational emotional link has mainly been found by analyzing relational problems and emotions connected with those problems. Researchers show and argue that in almost every situation of social interaction, relational problems or actions and/or the expression of emotion by one person leads to behavioral reactions and/or finally emotional reactions of another person (Kraut and Johnston 1979; Bavelas, Black et al. 1986; Fernandez-Dols and Ruiz-Belda 1995; Parkinson 1996; Keltner and Kring 1998; Morris and Keltner 2000; Barry and Fulmer 2005). Barry and Oliver (1996) developed a "model of the role of affect in dyadic negotiation", which shows very well that emotion is a complex function based on a lot of different variables, comprising all aspects and all lifecycles of a negotiation as well as of all negotiators.

We thus note that negotiations are a dynamic and inter-relational process, often laden with strong emotions. Naturally such a situation often leads to conflict and the expression of strong emotions. However, we should be aware that strong emotions not only arise due to conflicts or problems. They are also expressed when the negotiation touches a point of high interest to one of the negotiation partners (Lazarus 2001; Obeidi, Hipel et al. 2005). Hence strong and also sometimes uncontrollable emotions might be indicators for a high-risk situation or that particular issues under negotiation are at stake (Adler, Rosen et al. 1998). Also power and status can trigger strong emotions because negotiators might (implicitly) use them to communicate their power and status to others (Tiedens 2001; Anderson and Thompson 2004). Finally economic outcomes, as ultimate

stage of a negotiation, trigger emotions too. This step is not to be underestimated, as it impacts future interactions with the same negotiation partner(s) but also future behavior in similar situations (Oliver 1993; Barry and Oliver 1996).

It is important to mention explicitly that emotions can and will be evoked by a number of different factors that are interrelated with the negotiation context, as mentioned above. Words used by a negotiator also count to these factors and therefore might be equally important as an object under negotiation, or the relationship between the negotiators for example, simply because specific words can be considered as a very quick and efficient trigger for emotion (Schroth, Bain-Chekal et al. 2005).

A.2.3) Emotions as tactical value

Emotions are omnipresent in our daily lives as well as they are in negotiation situations. On one hand they are considered as "trigger" and on the other hand they are a result. However, it does not have to be left up to chance how emotions evolve and shape a situation.

Skilled negotiators thus should be able to embrace the power and use of emotions as tool for bargaining and be able to manage, and take advantage of their emotional repertoire (Fisher and Davis 1987; Schroth, Bain-Chekal et al. 2005). It is important, if not vital for negotiators, to understand that the display of emotions in a negotiation situation by one negotiation party can, and also will be used tactically (Kopelman, Rosette et al. 2006). Hence individually different "emotional tactics" due to individually different affective skills may likely be observed, which in the end allows for a willful coordination of social interactions via emotions (Keltner and Kring 1998; Kelly and Barsade 2001).

The power of emotions can already be used when the first contact between future partners is established in the negotiation initiation phase. From this starting point on the use of emotions co-determines the ongoing relationship and its facets, like

cooperative behavior or the compliance for commitment, and displays or communicates a person's intentions as well as motivations (Morris and Keltner 2000; Anderson and Thompson 2004).

Emotional behavior, also when used as a tactic, can be changing rapidly, comprise all kinds of different information and is a very multi-facetted phenomenon. This further means that a lot of different concerns might be addressed in a short period of time. Therefore, emotion used as a tactic can be tricky to employ and use, and one should be aware of that and prepare well when using emotions accordingly (Pruitt and Rubin 1986). Shapiro (2006) for example, gives recommendations of how the shortcomings of emotions as employed tactic can be addressed properly. He suggests that a negotiator should only focus on several, but not more than five, important or core elements and emotions attached to them, in order to render and keep the negotiation process manageable. However, by doing so, one might miss important and valuable information, shared by a negotiation partner. Also when deciding on which specific concerns to focus, the choice might not be optimal, and adjusting the set of utilities will draw off attention and resources. Overcoming these limitations can lead to huge improvements of the whole process. This is one of several important reasons for using adequate negotiation analyzing tools, especially in computer-mediated communication.

A.3) Discussion of the three approaches

"We see that emotional states are relevant at multiple points within a negotiation encounter" (Barry and Fulmer 2005), and that emotions need to be considered and evaluated by all sides, as trigger but also as outcome (Barry and Oliver 1996; Morris and Keltner 2000; Anderson and Thompson 2004). Thus a more dynamic point of view helps us to even better understand the complex process of negotiations, and learn from it.

Basically all three approaches discussed in the prior chapters highlight the value emotions have, or could have, within a negotiation situation. It may be obvious that

these perspectives, which still co-exist besides each other, sometimes naturally overlap at certain points, due to several reasons, which are finally connected with the relational nature of a negotiation situation.

Scherer (1986) postulates that evolving emotional processes are simply the result of a chain of quickly changing emotional states, which is a clue for emotions being cause as well as outcome. Furthermore Schroth, Bain-Chekal et al. (2005) for example, show that the effects of and on emotions are numerous and wide ranging, depending for instance on the opponent, the time and form of presentation, the context, expectations and norms, gender, or culture. Morris and Keltner (2000) strengthen this point and argue that relational "problems" within a negotiation structure emotional processes, because emotions not only evoke and are evoked by these relational problems, but also serve as *"interpersonal communication system"* between opponents. Establishing interpersonal emotional communication not only means engaging in and devoting oneself to the negotiation process, but also helps to establish synchrony between oneself and the negotiation partner, which finally leads to a better flow of information (Parkinson 1996).

Hence an analysis of emotion can and will reveal valuable information that finally helps negotiators to understand emotions better and use them more advantageous in the process of negotiating.

B) Computer Mediated Communication (CMC)

Conflicts are likely to arise in today's world and coping with these quickly and efficiently requires new methods and tools. Therefore it is becoming increasingly necessary to draw more attention to such new methods, which can have a strong influence on the whole process of interaction and negotiation. The upcoming chapter dealing with Computer Mediated Communication (CMC) and negotiations conducted on-line, will highlight the importance of this matter and offer ideas and principles available to handle new communication challenges.

It is already known and accepted that emotions can be, and most likely are, part of each human expression (verbal and non-verbal) (Izard 1993; Barry and Oliver 1996; Parkinson 1996; Forgas and George 2001; Glazer 2001; Kelly and Barsade 2001; Barry and Fulmer 2005; Butt, Choi et al. 2005; Obeidi, Hipel et al. 2005; Hancock, Landrigan et al. 2007), and recent data also confirms this for CMC (Boudourides 1995; Walther 1995; Glazer 2001; Brett, Olekalns et al. 2007; Derks, Bos et al. 2008; Derks, Fischer et al. 2008; Griessmair and Koeszegi 2008). As concluded by the last chapter, affect is a central factor in every human interaction and thus also in negotiations. Considering this dynamic factor of influence is equally important in CMC, because it too is a situation of inter-personal communication and thus underlies the same restrictions and rules. Computer mediated communication differs in some contextual and situational factors, but the overall process and character of negotiating remains a state of human interaction, which is subject to human bias, and thus predisposed by emotions and their procedural character. It is therefore necessary to try to understand this complex interaction, in order to better deal with it in CMC.

The focus of the present research on CMC will only lie on text-based communication and neglect the transmission of images. This is because most computer-mediated negotiations do so due to several reasons, which will not be questioned or discussed further here. New research on affect in CMC therefore relies on the analysis of written communication because it is the most common

communication channel and hence transports and reflects all communication cues (Hancock, Landrigan et al. 2007; Derks, Bos et al. 2008; Derks, Fischer et al. 2008).

It might be surprising that although communication on-line and face to face (FtF) differ from one another, emotional communication is very similar in both communication environments (Derks, Fischer et al. 2008). However, CMC may result in more explicit emotional behavior, which indicates that problems due to emotional troubles and unpleasant emotions might occur more often and sometimes more pronounced in CMC as compared to FtF communication (Kato and Akahori 2005; Derks, Fischer et al. 2008).

B.1) CMC: A definition

Past theoretical and empirical studies addressed the significance of information and knowledge gathered from negotiations, however those where mainly based on FtF communication rather than CMC. If however CMC was included in research, the aim of earlier studies was mainly to discover elements and cues that were lost in CMC when compared to FtF communication (Walther 1994; Boudourides 1995; Walther 1995; Glazer 2001; Liu, Ginther et al. 2001; Derks, Fischer et al. 2008). As communication and negotiation conducted online is notoriously different from communication and negotiation conducted FtF, our knowledge of these important processes of human interaction should be updated and new insights need to be developed, based on past observations as well as on new research.

One can imagine that on-line communication might bear different problems due to different reasons, as experienced in “normal” FtF relations, and thus learning from and understanding such problems is becoming increasingly important (Kato and Akahori 2005; Sokolova, Shah et al. 2006). Troubles may and will occur due to different reasons, but emotion as one key factor in this case, can be regarded as always being present within human interaction, even in CMC. Although emotion is known to be a crucial variable in CMC, a complete scientific understanding based on research of this phenomenon has only recently begun to develop (Murphy,

Lupton et al. 2007; Derks, Fischer et al. 2008; Gill, French et al. 2008). The shortfall of sophisticated studies on this topic may be attributed to the fact that being able to draw substantial conclusions requires people to become familiar with and establish an understanding of norms, values, and expectations of CMC first (Walther 1994; Glazer 2001). Thus, because this process of societal adaptation is rather slow, cultural acceptance and integration naturally took some time, but can be assumed as being established nowadays.

Initial work dealing with CMC yielded contradictory results due to inconsistencies in early conceptualizations of CMC, which was claimed to be a somewhat under-social and impersonal medium, lacking emotional transmission (Walther 1994; Walther 1995; Hancock, Landrigan et al. 2007; Derks, Fischer et al. 2008). Recent research though, holds the conceptualization of virtual environments as hosts of social context, because the new technological challenge of CMC also challenges social, psychological, and cultural norms and expectations (Boudourides 1995; Kato and Akahori 2005; Lupton, Hine et al. 2006; Brett, Olekalns et al. 2007; Murphy, Lupton et al. 2007).

Generally spoken, because CMC is an interaction between negotiation partners, it is naturally shaped by their actions and strategies, which could be either integrative or distributive for example. Hence conflicts are likely to occur, and social aspects such as different forms of emotions will be present in CMC as in other communication forms (Obeidi, Hipel et al. 2005; Pesendorfer and Koeszegi 2007).

Theoretically, CMC is commonly believed to be more task-oriented because of several attributes ascribed to written forms of communication (Wilkenfeld, Kraus et al. 1995; Delaney, Foroughi et al. 1997; Pesendorfer and Koeszegi 2007). People tend to be more concerned and mentally involved in written communication modes, which ultimately means that social and emotional expressions in CMC can be considered as more severe than in FtF communication (Pesendorfer and Koeszegi 2007).

Moreover, CMC is a different state of communication with its own physical environment, communication structures, as well as time and space constraints (Liu, Ginther et al. 2001; Kato and Akahori 2005). These particular aspects of CMC

result from diverse attributes inherent to on-line communication (Kiesler, Siegel et al. 1984). First, CMC can be either asynchronous or synchronous. Synchronous communication (e.g. chat) tends to be more competitive and affective, whereas asynchronous communication (e.g. e-mail) tends to be more personal-, information-, and task-oriented (Boudourides 1995; Liu, Ginther et al. 2001; Pesendorfer and Koeszegi 2006; Derks, Fischer et al. 2008). In addition, asynchronous communication may, to a large extent, reduce the loss of communication transmission, due to the possible reviewability of exchanged information (Kersten 2004). Second, CMC affects the spontaneity of the negotiation process because individuals will have more time to respond to their communication partner, and thus will have more control over how and what to communicate, including the expression of emotions (Derks, Fischer et al. 2008). Third, CMC contributes to the possibility of personal de-individuation (Kiesler, Siegel et al. 1984). Participants of CMC can almost freely chose a preferred level of self-disclosure (Joinson 2001), and decide on how to form and communicate their identities to others (Boudourides 1995). Anonymity usually is a pre-condition of CMC and can be influenced by the use of pseudonyms, the decision which information to reveal, and the intensity of social participation (Boudourides 1995; Kato and Akahori 2005). The often-discussed influential character of gender on negotiation may for example be (partially) offset by the possibility of anonymization (Boudourides 1995). One should also be aware that anonymity negatively correlates with the duration of the negotiation or relationship building stage, simply because the more information a person reveals, the less time needs to be invested in the gathering of information. However, the possibility and hence strategy of virtually creating and faking a personal image remains.

To address the complexity of the new on-line environment in which CMC takes place, different communication methods and systems are available. There is however no best solution as different setups of CMC systems influence the social context of on-line negotiation differently (Tu 2002). This can be attributed to an individually different use or different perceptions of CMC systems, as well as to a possible misperceived similarity to FtF communication in some points (Tu 2002; Murphy, Lupton et al. 2007).

CMC furthermore evolves in and ultimately proceeds in its own social context just as well as it shapes this social context (Zack and McKenny 1995; Murphy, Lupton et al. 2007). The underlying reason for this is that on-line communication, just as any other form of communication, involves inter-personal relationship building. Personal impression development and image creation are naturally important aspects in CMC when considering its defining attributes mentioned above (Liu, Ginther et al. 2001). According to Liu, Ginther et al. (2001) a person's intentions about which image a negotiation partner should have about his opponent, leads an individual's motivations to set different actions for creating a personal impression. These images CMC users develop about one another, will to some extent be altered by the perception of stereotypes, personal values, expectations, or experiences, and finally contribute to the formation of social context.

Considering the vital role personal perceptions play in creating social context, the communication of social cues can be regarded as crucial step in CMC, and may even be more important in CMC than in FtF communication (Zack and McKenny 1995; Joinson 2001; Liu, Ginther et al. 2001; Murphy, Lupton et al. 2007). This finding may most likely be attributed to the fact that CMC lacks certain immanent and non-verbal cues that are visible in FtF interactions.

Furthermore, Murphy, Lupton et al. (2007) postulate that people have normative expectations about a course of future interactions. These expectations are related to feelings, interpretations, and judgments about a specific situation, and hence co-determine how and why CMC is used. Also, norms set boundaries and influence a person's attitudes and actions. It is critical to be aware that norms evolve within the social context of CMC (as they do within the much broader context of social culture) and need a certain span of time to become universally accepted within their context.

B.1.1) A Model of Virtual, Text-Based Communication

Murphy, Lupton et al. (2007) provide a fairly general model to show how intra-personal processes are inter-connected with social context and ultimately CMC.

As explained by this model, each communicator is directly influenced by personal traits, judgments, and state emotions as well as cognition. Personality traits are individual characteristics or features, and Murphy, Lupton et al. (2007) derive them from the five big traits presented by McCrae and Costa (1991): extraversion, neuroticism, conscientiousness, agreeableness, and openness to experience. These traits, together with emotions, bias a communicator with respect to his judgments, assessments of a situation, and cognitive processing efforts. This is an important step because based on individual situational assessments and judgments about communication partners, assigned objectives, the social or even cultural context, or the method of communication, individuals decide how to communicate by processing all information obtained and cognitively available. Included in this evaluation is the final decision about message de- and encoding.

Altogether, the whole communication situation takes place within a broader social context that, on one hand influences the communication process and on the other hand is influenced by the communication process. Also the communication situation itself can be regarded as social context within a social context, thus enabling and supporting a contextual interchange. Hence the conclusion that CMC is a highly social interaction is valid (Joinson 2001; Murphy, Lupton et al. 2007).

One of the key elements in this equation can be considered to be affect, because its influence is present in almost every step, and finally strongly affects the ultimate decision of communication, and hence all communicators involved. Murphy, Lupton et al. (2007) highlight this important factor by referring to Bower's Network Theory of Affect (Bower 1991) and Schwarz and Clore's Affect as Information Approach (Schwarz and Clore 1993). The first theory argues that emotions are means for organizing and accessing our memory (Bower 1991), and the second approach states that emotions serve as guidelines and co-informational input when making judgments (Schwarz and Clore 1993).

However, as Murphy, Lupton et al. (2007) point out, individually different personality traits account for an individually different and unique use of emotion. Consequently cognitive processing efforts are bound to affective information, and differ with respect to the use of emotion. Thus revealing individual emotional information and patterns could help negotiators to better adapt to new situations, especially within a new social context. Hence the advantage of CMC lies in its text-based form of communication, which finally allows for better analysis and strategic use of emotions to avoid unnecessary conflicts and possible deadlocks.

B.2) CMC vs. FtF communication

Research on CMC, especially early research, focused mainly on the comparison of FtF communication to on-line communication (Kiesler, Siegel et al. 1984; Walther 1994). These research results indicate that CMC is not worse or more disadvantageous than FtF communication (Walther 1995; Joinson 2001; Kato and Akahori 2005). In fact, when used accurately, CMC may even outperform "traditional" FtF communication efforts (Joinson 2001).

Kato and Akahori (2005) analyzed and discussed findings of previous comparative analysis. They found that positive aspects of CMC include that it "is more impersonal and free, more uninhibited, contains more disclosures of personal information, more equal member participation, and more task-oriented interactions", and hence "allows people to feel more comfortable and confident in their discussions". Negative characteristics on the other hand comprise depersonalization effects and uninhibited behavior, less reluctance to change decisions, and a possible increase of extreme emotional behavior such as flaming (e.g. hostile behavior) (Kato and Akahori 2005).

Previous and recent data indicating these results almost traditionally includes the presence and function of cues (verbal and non-verbal) as imperative variables. According to Liu, Ginther et al. (2001) the current denomination of cues includes non-verbal cues and verbal cues. Non-verbal cues can be sub-categorized by

visibility (e.g. facial expressions), paralinguistic features (e.g. speech or vocal characteristics), psychological features (e.g. states of mind), and sociological features (e.g. inter-personal sympathy or liking). Verbal cues comprise variations in language, the use of words, or lexical diversity, thus all directly "visible" parameters of speech.

Whereas previous research investigated the influence of verbal and non-verbal cues separately, contemporary research indicates that these cues have a joint effect on human interactions (Kraut 1978; Liu, Ginther et al. 2001). The setup and use of verbal and non-verbal cues hence is important in all kinds of relational communication. With respect to the communication environment this setup may vary to a large extent and thus communication partners may have to adopt to their environment in order to achieve valuable outcomes. As FtF communication and CMC are notoriously different, their verbal and non-verbal cues-setup also differs considerably. Nunamaker, Dennis et al. (1991) conducted group experiments in virtual environments and showed that, positive and negative factors due to the mode of communication depend on several different variables, such as the given communicational situation. Thus they deviated that depending on these aspects, communication conducted on-line can either be regarded as more advantageous or disadvantageous than FtF communication (Gains and Losses Model).

More specifically, variations due to the environment of communication (FtF or CMC) arise because of general contextual differences and particular communication characteristics (Walther 1995; Murphy, Lupton et al. 2007; Derks, Fischer et al. 2008). The most important contextual difference, according to Derks, Fischer et al. (2008), is sociality, which manifests itself in a physical and a social dimension. The physical dimension refers to all physical characteristics people can share when they are at the same place, such as visibility and bodily contact. Thus this dimension comprises all non-verbal cues. The social dimension refers to the "extent to which the presence of the other person is salient" (Derks, Fischer et al. 2008). CMC was believed to be rather devoid of social cues, hence this quality of CMC is important to consider. Without doubt the transmission of social cues differs with respect to the communication medium. As a consequence Derks, Fischer et al. (2008) postulate that social presence in CMC significantly increases the importance and thus the influence of social norms on the whole situation.

Compared to FtF communication the influence of social norms might be even greater in CMC. The two contextual dimensions, the physical and the social dimension, altogether influence central aspects of communication, namely the "overall content and style of the message …, the expression and the recognition of discrete emotions" (Derks, Fischer et al. 2008). Based on similar dimensions Walther (1995) already attempted to predict differences between groups negotiating either FtF or via CMC.

The transmission of cues of social presence, however is not simply an automatic process in CMC but also depends on the decision of a negotiator, which characteristics he intends to reveal. Hence social role stigmata can be reduced and as a consequence social pressures accordingly (Stuhlmacher, Citera et al. 2007). Thus, as Stuhlmacher, Citera et al. (2007) point out, that problems based on different perceptions of social roles, such as gender differences, can be reduced by not negotiating FtF.

Another delineation of CMC from FtF communication by Murphy, Lupton et al. (2007) is based on four different characteristics: Synchronicity which refers to the extent of possible synchronous interaction, symbol variety which refers to the amount of available cues and channels, rehearsability which refers to the possibility of rehearsing a message before sending it, and reprocessability which refers to the opportunity of recapitulating already sent messages.

Finally Liu, Ginther et al. (Liu, Ginther et al. 2001) point out frequency and duration of messaging and speech as indicative variables for differentiating CMC from FtF communication. They show that messages sent via CMC systems, if high in frequency and long in duration, imply that the sender of the messages is social-emotional-oriented. Thus message frequency and duration significantly contribute to develop impressions of negotiation partners.

Empirical studies by Walther (1994; 1995) addressing differences between CMC and FtF communication also revealed that negotiations conducted online are far more impacted by a long-term (vs. short-term) perspective than negotiations conducted FtF. Furthermore, long-term relationships are not less personal when conducted online, whereas one-shot negotiations are. Also did people negotiating

via CMC never express more task-orientation or less intimacy than people negotiating FtF.

B.3) Emotion in CMC

The use of CMC is increasing and thus researchers are beginning to draw more attention to this topic. The absence of specific cues in CMC, which are present in FtF communication, has turned out not to be a huge disadvantage of this form of communication, contrary to expectations. To support these findings the upcoming chapters will give an overview of theories linking emotions and CMC, and discuss approaches of how emotions can finally be expressed and communicated in online negotiations.

B.3.1) A theoretical overview: Is CMC lacking non-verbal cues?

Theories dealing with the incorporation of affect in CMC can generally be divided into two perspectives, which will be discussed in more detail below: The cues filtered out perspective, and the cues filtered in perspective.

B.3.1.1) The Cues Filtered Out perspective

This perspective is based on the assumption that media characteristics defining CMC and FtF communication are responsible for differences between those contexts of interaction (Walther 1995). The absence of directly visible cues, consequently physical presence, implies a lack of para-verbal and non-verbal cues

(Walther 1994; Boudourides 1995; Liu, Ginther et al. 2001; Derks, Fischer et al. 2008; Griessmair and Koeszegi 2008). Thus the cues filtered out perspective rests upon the assumption that specific information, especially "social context cues" (Walther 1994), is not being fully transmitted (Derks, Fischer et al. 2008).

Researchers argue that the lack of specific cues can be attributed to the limited bandwidth of CMC (Walther 1994). Communication and interaction is thus considered as less emotional and socioemotional, less personal and more anonymous, less friendly and sometimes more hostile, and more task-oriented communication (Walther 1994; Boudourides 1995). As Boudourides (1995) denotes it, CMC takes place in a "social vacuum", a status that can be overcome by sharing information such as, gender, age, appearance, etc.

Within the cues filtered out perspective, several different theories have been established, aiming to explain and elucidate the perspective at hand. These theories are the Social Presence Theory, the Lack of Social Cues Hypothesis, and the Media Richness Theory.

The *Social Presence Theory* (Short, Williams et al. 1976) asserts that in CMC, negotiation partners pay less attention to the (social) presence of others involved. The limited channel and cues available in CMC reduce ones subjective feeling of the social presence of the opponent. Thus, the higher the degree of social presence is, the more personal the conversation becomes (Walther 1994; Walther 1995; Lupton, Hine et al. 2006).

The *Lack of Social Context Cues Hypothesis* (Sproull and Kiesler 1986) argues that the reduction of available social cues in CMC deregulates the communication situation in a matter that people tend to focus less on others and more on themselves. Furthermore the interaction becomes depersonalized, sometimes hostile, and contains specific medium-bound information that is not present when negotiating FtF.

The *Media Richness Theory* (Daft and Lengel 1986), sometimes also referred to as Information Richness Theory (Daft and Lengel 1984), evaluates specific communication media based on their "richness", which is the number and variety of cues and attributes available for communication and information sharing

(Lupton, Hine et al. 2006; Murphy, Lupton et al. 2007; Otondo, Scotter et al. 2008). Lupton, Hine et al. (2006) further indicate that based on the Media Richness Theory, several other theories evolved in this field, jointly referred to as "Media Selection Theories" by the authors. One of the most important of these theories, by Trevino, Lengel et al. (1987), is an expansion of Goffman's Symbolic Interactionism Theory (Goffman 1982), and expands Media Richness Theory by introducing the possibility of communicating (via) symbols. Generally media richness may comprise different factors, such as various symbols that can be used to communicate, the amount of information that is being transmitted, or the form of social presence the communicators establish (Otondo, Scotter et al. 2008). However, a "richer" medium, or a medium with more available bandwidth is not necessarily of advantage, because the more cues are available the more complex, unanticipated, and overloaded the communication may become (Walther 1995; Otondo, Scotter et al. 2008).

B.3.1.2) The Cues Filtered In perspective

"Richness is not an invariant property of a communication medium, but an emergent property of the interaction between the communication medium and its organizational context." (Lee 1994)

This perspective evolved out of criticism of the Cues Filtered Out perspective. Criticism was based on several field experiments that showed that communication and negotiation success not only rely on internal factors of a specific communication medium, but also on several external factors related to the task, such as media, task, and communication complexity, environmental uncertainty, experience, next to other inter-dependencies (Walther 1994; Murphy, Lupton et al. 2007). Accordingly Walther (1994) argues that because of the complexity of (social) interactions, it is important to not only consider factors of media choice, but also of media effects.

Recent studies dealing with CMC (Liu, Ginther et al. 2001; Lupton, Hine et al. 2006; Murphy, Lupton et al. 2007; Derks, Bos et al. 2008; Derks, Fischer et al. 2008; Griessmair and Koeszegi 2008), acknowledge the findings of Walther (1995) who positions that CMC contains social information, which is not only influenced by the communication medium, but also strongly depends on various constraints.

Although it is more difficult to transmit emotional information in CMC (Rivera, Cooke et al. 1996), this mode of communication allows for the transmission of several emotional cues (Walther 1994; Boudourides 1995; Walther 1995; Rivera, Cooke et al. 1996; Liu, Ginther et al. 2001; Lupton, Hine et al. 2006; Derks, Bos et al. 2008). This information can be conveyed more obviously and directly in specific words (Boudourides 1995), or manifest itself in certain characteristics as Liu, Ginther et al. (2001) state. First, CMC is defined by specific temporal features, which include the timing of sending a message and the time a message is being received. It is not only important how fast one replies to specific messages (emotion or task oriented). Also the point of time during the day (morning, afternoon, evening, night) chosen to send a message conveys information about the sender. Second, primacy and recency effects have been found to be an influential characteristic in CMC, especially at the very beginning or very end of a negotiation. Third, also the duration, frequency, and latency of responding and sending a message are characteristics providing clues about the negotiation. In addition this information can also include the use of emoticons (or smiley's) as they enrich the verbal exchange of text messages by another, more emotionally bound, category (Boudourides 1995; Derks, Bos et al. 2008). Rivera, Cooke et al. (1996) additionally showed that when emoticons were used by one negotiator the counterpart interpreted them correctly and as intended by the sender. Furthermore, the usage of emoticons seemed to have a satisfactory impact on the negotiator's perception of the overall negotiation.

Liu, Ginther et al. (2001) point out that all these features of CMC constitute a paralanguage that improves the communication between negotiators by offering a possibility to extend the limited channel of CMC. Boudourides (1995) and Brett, Olekalns et al. (2007) support this view and further argue that this paralanguage conveys information not only about emotions, but also about social norms, values and intentions, as well as about people's psychological states. Brett, Olekalns et al.

(2007) derive this insight from Face Theory (Goffman 1982) by arguing that the construction of (initial) negotiation phrases impacts the perception of the negotiation partner about oneself. Different wording of messages thus can influence a counterpart's actions, by giving or attacking face (Brett, Olekalns et al. 2007).

The most prominent theory representing the cues filtered in perspective is the *Social Information Processing (SIP) Theory* (Walther 1994; Walther 1995) which aims to describe individual processing of social information and its influence on the relationship between negotiators (Walther 1995). The core point of this theory is that socio-emotional messages can be transferred in CMC, similarly to FtF communication, which facilitates the establishment of interpersonal relationships between negotiators (Walther 1994). Thus the SIP theory argues that relational impression development in CMC is not that different from FtF communication, but with one important constraint, the factor time (Walther 1994; Walther 1995; Liu, Ginther et al. 2001). First it takes more time to transmit the same amount of information in CMC. Therefore people need more time to express task oriented and socio-emotional information. However, the longer the relationship lasts the more accustomed and familiar negotiators will become with the negotiation situation and their counterpart, which will result in a reduction of the time needed to negotiate (Walther 1994; Walther 1995). Liu, Ginther et al. (2001) accordingly describe individual impression development and socio-emotional information management as "social currency" that can be used by negotiators to exert influence on the negotiation at hand.

Thus negotiations conducted via CMC are not solely task oriented but also always contain socio-emotional cues (Liu and Ginther 2001). However, as the expression of emotional and social cues is not as obvious in CMC, negotiators base their judgments on slightly different attributes as compared to FtF communication. Consequently not only the content of a negotiation is subject to individual judgment, but also specific linguistic attributes (Brett, Olekalns et al. 2007). Hence the detection of emotion in CMC can be attributed to "reading between the lines", which will sooner or later be internalized and become a normative behavior when continuously communicating online.

B.3.1.2.1) The transmission of emotion in CMC via communicative layers

Earlier discussions, both in this paper and by other authors, about electronic negotiations, the possibilities of communicating via ENSs (electronic negotiation support systems), and the ability of participants to shape electronically mediated negotiation processes point to the importance and need of precisely analyzing the inter-personal communication structure in electronic negotiations, especially with respect to emotions.

A jolly good paper by Griessmair and Koeszegi (2008) deals with this topic, therefore this chapter will be based on their work, which uses and enhances previous work researching different communicative layers of messages available for transmitting different kinds of information (Schulz von Thun 1981), and the relation of these layers with the involved actors in the negotiation process (Watzlawick, Beavin et al. 1967).

When analyzing messages sent during electronic negotiations it is important to understand that especially in virtual environments these messages not only convey one unquestionable true meaning. Rather these messages consist of four "distinct communicative layers" comprising: The "factual content of the massage", "self revelation", "information about the relationship between the communicators", and "appeal".

Instead of needing to transmit several different messages to communicate different kinds of information, people express various pieces of information within one single message by making use of the distinct communicative layers. It is not only factual information that is being transmitted but messages may and most likely will also contain emotions. Emotions therefore are transmitted as a second layer, inherent in every message sent and received.

Affective dispositions and states can be expressed by the use of language. Especially language intensity and immediacy are found to be informational layers communicating emotion, also because the direct expression of affect and emotion via ENSs is rather rare. In order to analyze necessary and available information, including emotional information, it is thus necessary to also capture meanings "hidden" in the distinct communicative layers. This is possible by splitting up the

negotiation into different units of analysis, mainly a meso-level (whole messages) and a micro-level (single utterances).

For analyzing emotional content at the meso-level, whole messages sent by negotiators serve as units of analysis. In this case the context on which the analysis is based is larger than at the micro-level, because whole messages usually comprise more information than single utterances. Also, it is important to note that emotional layers are an inherent part of a whole message, and thus co-determine the overall "tone" of this message. The analysis of emotions at the micro-level is very similar to the analysis at the meso-level with the main difference being the context complexity. Both, the meso- and micro-level analysis are based on static characteristics as they deal with one node of information at a time.

Finally a third level of analysis (macro-level) focuses on emotional patterns of a whole negotiation. Thus this is a dynamic analysis of emotions that evolve throughout the whole negotiation process between negotiators. Emotional variety usually is very broad as a negotiation "emotionally evolves" and accordingly moves through different emotional states. Griessmair and Koeszegi demonstrated that failed or successful negotiations typically show different dynamic emotional patterns.

B.3.1.3) Comparison of perspectives

Considering and comparing the Cues Filtered Out as well as the Cues Filtered In perspective still yields the question, which of these perspectives might be more appropriate when dealing with emotions and CMC.

Pesendorfer and Koeszegi (2005) for example, address this question rather pragmatic by regarding the Cues Filtered Out perspective as pessimistic view and the Cues Filtered In perspective as optimistic view. Others argue that an appropriate balance between media richness and media efficiency is important to consider (Daft and Lengel 1986), or that factors such as time, synchronicity, or

data treatment (Walther 1995; Pesendorfer and Koeszegi 2005; Zhou and Zhang 2007) dictate the choice of perspective.

Recent experimental studies however showed that there is more empirical support for the Cues Filtered In perspective. Walther (1994) did not find any support for the Cues Filtered Out perspective and showed that there were no direct media effects influencing relational behavior and interpersonal intimacy. He confirmed that a central influencing variable for these factors is the "actual anticipation of future interaction", and not the communication medium, which he identified as strictly moderating variable. Another empirical study, undertaken by Hancock, Landrigan et al. (2007) also shows strong support for the Cues Filtered In perspective. The authors showed that participants had little difficulty in identifying emotions (positive and negative) in computer-mediated, text-based communication. Also negotiators were able to, and fast in adopting to the new virtual environment, by adjusting their emotional expressions to the form of communication. Emotional detection and expression was mainly based on four communicative methods or observations: The frequency of disagreement, the use of negative affect, the use of punctuation, and the total amount of words.

Thus, although it might seem that CMC systems are not optimal for the transmission and detection of affect, people communicating on-line are able to express their feelings via a "socio-emotional layer" inherent in CMC (Griessmair and Koeszegi 2008).

B.3.2) How can emotions be expressed and communicated in CMC?

The question of how emotions are and can be communicated in CMC is very complex. People most likely will not be able to simply choose whether they want to communicate some sort of emotion or not.

Also, there is a strong inter-dependence between emotional and cognitive processes, and thus strictly separating those two might not be possible. Hence

theorists speak of a “cognitive-emotional fugue” (Lewis and Haviland-Jones 2004) as this inter-relation is hard to avoid or rule-out, and thus has significant impacts on a variety of factors (Johnson and Tversky 1983; Isen, Daubman et al. 1987; Kumar 1997; O'Connor and Arnold 2001; Anderson and Thompson 2004; Van Kleef, De Dreu et al. 2004a; Van Kleef, De Dreu et al. 2004b; Olekalns, Robert et al. 2005; Schroth, Bain-Chekal et al. 2005; Kopelman, Rosette et al. 2006; Shapiro 2006; Sinaceur and Tiedens 2006).

Each single message sent via CMC systems provides directly visible information as well as expressions of emotions. The emotional expressions enrich the communicational context, and provide additional information about possible situational interpretations (Lupton, Hine et al. 2006). Thus emotional expressions influence the meaning and overall interpretation of specific messages, and accordingly may manipulate relational characteristics and finally negotiation outcomes (Liu and Ginther 2001; Lupton, Hine et al. 2006).

The mere possibility of transmitting emotions, does not presume that negotiation partners interpret them correctly. Emotional misjudgment may have severe consequences on the overall negotiation process, and negotiators thus should be aware of this possibility (Kato and Akahori 2005). However, the more experienced communication partners become with a communication medium, and with their counterpart, the less likely poor judgment will influence the communication situation. Also people adapt to new communication situations and environments, and search for ways of how to optimally make use of them (Hancock, Landrigan et al. 2007).

As communicating and negotiating in virtual environments is already becoming more common and broadly accepted, people using CMC have enough experience within this environment, in order to use and interpret it correctly and accordingly. Hence it is valuable to discuss general methods, which can be used for communicating emotions via CMC. The maybe most obvious way for doing so is the direct verbal expression of emotions, and therefore a negotiators decision to use emotional language and expressions (Brett, Olekalns et al. 2007), also referred to as affect terms (Hancock, Landrigan et al. 2007). Another rather direct, yet underexplored, form of expressing emotions is the use of emoticons or smilies.

Also punctuation or the capitalization of letters or whole words can be a direct method for showing feelings (Hancock, Landrigan et al. 2007). The frequency of sending messages and the duration of a negotiation (Liu, Ginther et al. 2001), as well as the total number of words used by a negotiator are too indicators for personal emotional states (Hancock, Landrigan et al. 2007). Further the frequency of objections or disagreement between negotiating parties allows us to draw conclusions about negotiators emotions (Hancock, Landrigan et al. 2007).

Methods of expressing and transmitting emotions can also, as previously mentioned, be used as strategic and tactical gambit. These strategies may additionally be supported and enhanced by communicating via information technology, which simplifies the manipulation, communication and sharing of only "personally useful" relationship building characteristics such as gender (Stuhlmacher, Citera et al. 2007), status, age, ethnicity, country of origin, profession, etc.

B.3.3) The willingness to communicate and share emotions

We know that expressing emotions in CMC is possible and generally understood by negotiation participants. But because emotional expressions might not always be of advantage, just as in FtF communication, people sometimes consider if they want to willingly share their feelings or show emotions. This is of course not true for just any situation, because emotions sometimes are inherently connected with specific actions, especially in extreme or pressure situations. Therefore we need to consider the individual willingness to express emotions, and uncover the principles on which this decision is finally based.

The willingness to reveal certain pieces of information in CMC, also termed self-disclosure, has been investigated in three different studies by Joinson (2001). According to his research, significantly more information is being disclosed by people in virtual environments as compared to FtF negotiations. Anonymity was found to be indirectly related to overall self-disclosure. So did participants

negotiating on-line disclose less information when they were able to use a video camera.
Finally Joinson discovered that not only anonymity affects self-disclosure, but also private self-awareness. People who showed low levels of public self-awareness and high levels of private self-awareness spontaneously disclosed more information than others.

Self-disclosure of information and emotion impacts the relationship between communicators, especially in the long run. The stronger the relational ties between negotiators are, the "better" they are socially embedded. This in turn not only means that negotiators are willing to disclose more information and emotion and engage in more integrative communication, but also that negotiators are more likely to reach agreements by using more integrative strategies (Pesendorfer and Koeszegi 2007). Thus Pesendorfer and Koeszegi (2007) conclude, that socially embedded communication partners are more efficient in communicating with each other.

The degree to which communication partners are socially embedded or the strength of their relationship naturally not only depends on self-disclosure. This is a critical point because the willingness to share emotions also depends on other factors. Thompson and Nadler (2002) found these to be primarily inter-personal coordination and social contagion. Furthermore they point to four specific biases, which altogether may manipulate the relationship and influence the personal willingness of sharing information or emotion. First, the temporal synchrony bias holds that people tend do behave as if they are communicating synchronous, even though they are not. This is problematic because negotiators may wrongly believe that they can in fact control the sending and receiving of messages, which finally may lead to frustration or negative emotions. Second, the burned bridge bias addresses the lack of subjectively felt tangibility of a situation. In this case people tend to engage in more risky behavior and feel less accountable for their actions when communicating via CMC. Third, the squeaky wheel bias states that an escalation of conflict is more likely in virtual environments because people tend to be more open for negative affective states in CMC. Fourth, the sinister attribution bias describes the misinterpretation of others' behavior and the blindness to contextual factors and their complexity.

Altogether these factors and biases show that a negotiator's willingness to disclose emotions depends on personal characteristics and information technology that affects these characteristics (Moore, Kurtzberg et al. 1999; Joinson 2001; Thompson and Nadler 2002). Based on these aspects Thompson and Nadler (2002) confirmed that the willingness to disclose information and emotion has an overall positive effect on a negotiation. They found that by communicating non-task related issues, which they called "schmoozing", negotiators are able to build better rapport. Better rapport in turn leads to more positive emotional behavior and cooperation, which induces more trust, and finally leads to more, faster, and better agreements. Moreover this process impacts a person's memories and feelings and thus also has a long-term effect.

B.3.4) An example: Irony

To better illustrate the significance of considering cues in CMC, as well as the questions whether and how to communicate emotion, the example of irony is well suited to jointly discuss these issues. This example is taken from a recent empirical study by Hancock (2004) investigating this subject.

Irony is a complex construct as only a few words may be used to express quite a lot of different thoughts. Thus, for using ironic expressions the sender of a message needs to transmit several other cues to signal his intentions. For doing so it makes a difference whether the communication takes place FtF or via CMC, technically spoken. Based on the possible availability of cues for communicators in CMC, the question might arise if this virtual mode of communication actually is of disadvantage in this case. Interestingly Hancock found that people do not use less irony in CMC as compared to FtF communication, however it is used slightly different and adapted to the communicational context.

In a CMC setting the expression of irony is less marked and less obvious, although sometimes accompanied by different forms of punctuation or emoticons. Furthermore the written form of communication helps communicators to use and

understand irony because they simply have more time for reading and thinking about messages, and putting them into context.

Now that we know that the possibility of communicating irony exists in CMC, the remaining question is how willingly people want to make use of this opportunity. Although it might seem riskier using ironic expressions in CMC, Hancock found that irony is actually being used more often in virtual environments, because people seem to be less concerned about the impression they create in this setting. It also seems that irony is a rather important communicational tool to express dissatisfaction or a violation of certain rules or norms. Also feedback provided by the communication partner about the comprehension of ironic utterances influences one's personal decision whether or not to use ironic expressions.

B.4) Negotiating via Information Technology

The present work focuses on the communication of affect in electronic negotiations, supported by electronic negotiation support systems (ENSs). ENSs systems belong to the more general category of CMC systems and respectively share the same features, functions and limitations, as mentioned in prior chapters. However, the presence and role of affect in this negotiation context seems to be rather underexplored, and to some extent still neglected.

Research in this field was almost only based on the comparison of either communication modes (synchronous vs. asynchronous) or communication environments (CMC vs. FtF communication) (Pesendorfer and Koeszegi 2005). Furthermore Pesendorfer and Koeszegi (2005) hold, that studies researching e-negotiations mainly focus on outcomes and tend to leave the process of negotiating itself aside. This limits the possible and valuable insights into e-negotiations, which would allow researchers and negotiators to better harvest the power of negotiations mediated and supported by modern information technology.

Empirical studies in this field are rare but generally point out one significant aspect that should be considered for present and future research, namely that integrative factors and processes (as are emotions), which are constantly evolving within the negotiation are a key for better understanding this complex construct (Stroebel 2000; Morris, Nadler et al. 2002; Kersten and Zhang 2003; Li, Giampapa et al. 2006; Nastase 2006; Brett, Olekalns et al. 2007; Griessmair and Koeszegi 2008).

As referred to earlier, CMC and thus also electronic negotiations, are characterized by limited channel, when compared to FtF communication (Joinson 2001; Kersten 2004).
However verbalizing this difference as limitation may be misleading. A variation between FtF communication and CMC is logic, and new CMC systems are designed to cope with this difference. Especially because relational interactions may differ radically, for example with respect to the environment, goals, topics, rules or even personal perceptions, different types of information communication technologies (ICTs) are available. Hence negotiators may choose to use the system(s) that fit(s) their needs best. These systems differ by how information is transmitted, processed, and analyzed, as well as to which degree theses systems provide (live) negotiation support (Kersten 2004).

Generally ICTs are divided into two categories, NSSs (Negotiation Support Systems) and DSSs (Decision Support Systems). NSSs are designed to support the whole negotiation process, hence all participating negotiators, whereas DSSs support negotiators individually. A precise distinction between those two categories is difficult because CMC support systems may use features of both support system categories.

The term of ENSs is a rather recent expression and support by ENSs is very similar to other ICTs, with one important differentiation. ENSs are only internet-based systems (Kersten 2004). Thus e-negotiations only refer to internet based negotiations conducted in virtual environments mediated by information technology (Kersten 2004; Pesendorfer and Koeszegi 2005; Sokolova and Szpakowicz 2007).

Specifically ENSs are special due to several reasons. They are only internet-based and thus easily accessible, and they are simple to configure and to adapt (Kersten 2004). As described by Kersten (2004) e-negotiation technology furthermore:

- "Supports decision- and concession making,
- suggests offers and agreements,
- assesses and criticizes offers and counteroffers,
- structures and organizes the process,
- provides information and expertise,
- facilitates and organizes communication,
- aids agreement preparation, and
- provides access to negotiation knowledge, experts, mediators, or facilitators."

Hence Kersten (2004) points out that ENSs provide a bunch of interesting and also advanced features, which may be set up and used for letting the system actively follow and participate in the negotiation process.

Depending on the ENS in use different features can be observed and respectively distinct data may be collected for further analysis. Thus according to system features an ENS may "actively participate" in the negotiation to a certain degree (Kersten 2004). Such participative systems are termed Socio-Technical-Systems (Kersten 2004) because they are an active factor in the negotiation context, which is shaped by "people, practices, values, and technologies". Accordingly these Socio-Technical-Systems affect the inter-relation between these variables (Nardi and O'Day 2000).

Kersten (2004) further classifies ENSs into three categories according to system inherent features and thus the level of possible active participation. First, there are *passive systems* that simply allow for the transmission of text messages (e.g. email or chat). Second, *active systems* are more advanced and are able to follow or monitor the negotiation process and its underlying single actions and reactions. These systems however do not have the permission to take actions on their own, but depend on confirmation or activation by a user and hence can be regarded as providers of assistance. Third, *proactive systems* possess the same analytical functionality as active systems but furthermore are able and capable to directly participate in the negotiation process by providing assistance, making suggestions,

offering criticism, and presenting meditational advise. Considering these categorizations of ENSs it could be useful to distinguish between them when evaluating and analyzing negotiations supported by electronic negotiation technology.

Nevertheless there are specific characteristics that all ENSs share. First and foremost the communicational interaction is restricted to the transmission of textual messages, which can have either formal or informal character (Sokolova, Shah et al. 2006). Also, according to Kersten (2004) "there is a trade-off between the loss of communication bandwidth and the gain of processing capability", which means that the limited amount of available non-verbal cues can be compensated by the use of sophisticated information technology, as discussed above.

Hence Sokolova and Szpakowicz (2007) denote that language is a key factor in the negotiation process and consequently negotiators as well as ENSs base their assessments of specific situations as well as their decisions, on the analysis and interpretation of language, as it is the main source of information in electronic negotiations. Based on these evaluations negotiators employ different tactics and strategies, which in turn are observable patterns. These patterns are integrated in the decision making process of negotiators as well as ENSs. Such observable "clues" for example include the analysis of single words and their relation to the overall negotiation process. Sokolova, Shah et al. (2006) for instance showed that process specific or negotiation related information is very commonly transmitted, and words related to this kind of information are among the words most used in the inter-relational communication process. Based on diverse analysis of language, outcomes of electronic negotiations can be fairly well predicted by observing the overall negotiation process (Sokolova and Szpakowicz 2007).

C) Empirical study

C.1) Sample & Data

The data used were obtained from the Inspire© database, which stores information gathered from negotiations conducted via the Inspire© e-negotiation system. In the case of the present work, case specific data from a simulated negotiation exercise, called the Cypress Cycles case, were used.

C.1.1) The Inspire© System

The Inspire© platform is an ongoing project by the Concordia University of Montreal and the Carleton University of Ottawa, and is internationally used for teaching and research on electronic negotiations. The Inspire© system is one of several systems based on the Invite© software platform and "combines negotiation analysis methods, with communication facilities and graphical tools" (InterNeg©). It is used for training and research, as negotiation simulator, as DSS, and as NSS.

Participants are first pooled by administrators and assigned to specific negotiation exercises or cases. Each negotiation consists of two parties negotiating with each other. Partners are assigned randomly. After this initial preparation phase, every negotiator receives case specific information and is asked to rate the importance of the issues and option packages under negotiation. This is done in a multiple step process with guidance of the negotiation platform. Subsequently the negotiation starts and may be initiated by either party. Every negotiator has the possibility to send personal messages and/or issue package offers to his counterpart. An issue package reflects a negotiator's utility, comprising all issues under negotiation. Utility values are automatically calculated by the system, based on each

negotiator's individual prior issue rating. Every negotiator is only able to see how the sent or received issue package reflects his own utility. If both negotiators come to an agreement, the negotiation system will end the negotiation and proceed with the post-settlement phase. In this stage, the system will verify if the negotiators reached an efficient solution, by checking if both negotiated utility sets lie on the common efficient frontier. When the post settlement phase is concluded, the negotiation is over and finally available for administrators to review and analyze.

C.1.2) Case Description: Cypress Cycles

The data we used for our analysis stems from a simulated negotiation case, also referred to as the Itex – Cypress negotiation case. The experiment involves two companies. Itex manufacturing, a producer of cycle parts and components, and Cypress Cycles, a manufacturer and vendor of cycles. Experiment participants represented either one of these two companies, and had to negotiate a deal with the other company, based on four pre-defined issues: product price, delivery time, terms of payment, and return policy. Negotiators are informed that other possible business partners exist on the market, so that a negotiation does not necessarily have to be concluded positively.

C.1.3) Data

As specified, data were taken from the Inspire© database, limited to the Cypress Cycles negotiation case. At the moment of this study the database contained 2254 negotiations. For the present investigation we randomly selected 60 negotiations (30 agreements and 30 no-agreements). Preliminary selection criteria as required by the analysis were that the negotiators had to include offers with respective utilities along with the message and that offers were sent alternating.

Furthermore, during the selection process, some negotiations had to be eliminated. First, negotiations that contained private information (e.g. an exchange of private e-mail addresses) and second, negotiations in which no agreement was reached due to time out. These were replaced by other randomly chosen negotiations from the Inspire© database.

The selected negotiations were randomly divided in two groups for further analyses for two reasons: First, because MDS is a tiresome task, especially when untrained coders have to rate a large number of stimuli, as in our case. Second, because MDS is an inductive procedure, the same dimensions should be identified by two independent groups individually.

Group 1		**Group 2**	
30 Negotiations (246 Messages)		30 Negotiations (241 Messages)	
Agreement	No Agreement	Agreement	No Agreement
15 Negotiations	15 Negotiations	15 Negotiations	15 Negotiations
116 Messages	130 Messages	110 Messages	131 Messages
7,73 Average Length	8,67 Average Length	7.33 Average Length	8,73 Average Length
1,98 Standard Deviation	2,87 Standard Deviation	1.58 Standard Deviation	2,43 Standard Deviation

Table 1: Group overview

To finally obtain the data, which was used for the MDS analysis, we asked students to rate and describe every message of the previously selected 60 negotiations, which we divided into two groups, as specified above. The raters received a package of either one of these two groups containing: Piles of randomized messages of 30 negotiations (every single message on one piece of paper), and a detailed instruction on how to proceed.

Raters were asked to randomly pick one message and use it to start a pile, representing a specific emotion. Subsequently they picked another random message and either assigned it to the newly created pile, or used it to form another pile representing another distinct emotion, whereas the possible number of piles was not limited. The raters proceeded in the same way until all messages were assigned to piles. Finally we asked the participants to shortly describe the emotion represented by a pile, as well as to rate its emotional strength on a scale from 1 to 7 (1 representing very positive emotions, 4 being emotionally neutral, and 7

representing very negative emotions). We also asked the raters to underline the words in every message, they considered as decisive for their judgment.

C.2) Multidimensional Scaling (MDS)

For the present study we employed multidimensional scaling. MDS has already been used in negotiation research as well as for the analysis of emotions. For emotion analysis, this technique is especially useful, as emotions are inductively generated and thus do not emerge according to a hierarchical taxonomy. The inductive nature of MDS thus does not limit our research to certain previously specified dimensions, as deductive approaches do (Srnka and Koeszegi 2007), but enables us to apply more open and also objective principles. Contrary to content analysis, MDS is not limited to non-metric data levels, and furthermore provides the possibility of multidimensional representation. This is important in our case, since one message can be characterized by more than only one emotion. In addition, the metric data level is useful, as it allows for the representation of the degree to which an emotion is present in a message, and as it provides advantages for further analysis.

C.3) Data Analysis

For data analysis we used an inductive approach and thus the choice of the number of dimensions as well as their interpretation is crucial. As suggested in literature, we employed external criteria as aid for choosing the number of dimensions and their respective interpretations, additional to the goodness-of-fit measures.

For determining of the number of dimensions it is suggested to inspect the decrease in stress (Kruskal 1964), however other authors also speak of the

"legendary statistical elbow" (Cox and Cox 2001). In the present study, no distinctive decrease in stress could be identified (Table 2a & 2b). Stress values for each dimensional solution are rather high and indicate a mediocre fit. This result, however, was not surprising as stress values increase with the number of stimuli. Values that are obtained in classical applications with 7 to 18 items (Henry and Stumpf 1975; McIntyre and Ryans 1977; Bijmolt and Wedel 1999) cannot be expected in the present context with more than 200 items.

	D1	**D2**	**D3**	**D4**	**D5**
Normalisierter Roh-Stress	0,14941779	0,08155558	0,05382717	0,0365951	0,02816655
Stress-I	0,38654597	0,28557938	0,23200683	0,19129845	0,16782892
Stress-II	0,65129133	0,62486184	0,61842821	0,59581468	0,59127176
S-Stress	0,2850672	0,17235287	0,12707456	0,09363977	0,07701889
Erklärte Streuung (D.A.F.)	0,85058221	0,91844442	0,94617283	0,9634049	0,97183345
Kongruenzkoeffizient nach Tucker	0,92227014	0,95835506	0,97271416	0,98153192	0,98581614

Table 2a: Goodness-of-Fit (Group 1)

	D1	**D2**	**D3**	**D4**	**D5**
Normalisierter Roh-Stress	0,20506481	0,10380171	0,06435378	0,04691017	0,03441346
Stress-I	0,45284083	0,32218272	0,25368046	0,21658755	0,18550865
Stress-II	0,77819391	0,74406958	0,72654927	0,73582645	0,71663661
S-Stress	0,37180175	0,23423089	0,16059512	0,12661845	0,09968198
Erklärte Streuung (D.A.F.)	0,79493519	0,89619829	0,93564622	0,95308983	0,96558654
Kongruenzkoeffizient nach Tucker	0,89159138	0,9466775	0,96728808	0,9762632	0,98264263

Table 2b: Goodness-of-Fit (Group 2)

In our case, for the determination of the number of dimensions, we calculated logistic regressions on whether negotiators reached an agreement or not. As can be seen in Table 3a and 3b, in the two-dimensional solution, both dimensions are highly significant with R^2 of 0,369 for group 1 and an R^2 of 0,389 for group 2. Also in the three-dimensional solution, all dimensions are highly significant with an R^2 of 0,372 for group 1 and an R^2 of 0,4 for group 2. In the four- and five-dimensional solution, the added dimensions are non-significant in both groups. Hence, the results of the logistic regression suggest a three-dimensional solution as being sufficient for explaining whether negotiators reached an agreement or not. It will

be shown subsequently, that the here identified dimensions integrate in existing negotiation and emotion theory, as most dimensional emotion models employ a two- or three- dimensional solution.

N (Agreement) = 116 N (No Agreement) = 130	**Model 1 (2 Dim)**	**Model 2 (3 Dim)**	**Model 3 (4 Dim)**	**Model 4 (5 Dim)**
D1	-3,193 (0,000)	-2,678 (0,000)	-3,200 (0,000)	-2,535 (0,000)
D2	,981 (0,012)	,930 (0,017)	-,810 (0,034)	,681 (0,119)
D3		-1,511 (0,000)	,707 (0,075)	-1,952 (0,000)
D4		(0,000)	-,597 (0,140)	,610 (0,171)
D5				-1,354 (0,002)
Constante	-,252 (0,140)	-,264 (0,126)	-,273 (0,116)	-,271 (0,129)
R^2 (Nagelkerke)	,369	,372	,367	,417
R^2 (Cox&Snell)	,277	,279	,275	,312

Table 3a: Logistic Regressions on Agreement (Group 1)

N (Agreement) = 110 N (No Agreement) = 131	**Model 1 (2 Dim)**	**Model 2 (3 Dim)**	**Model 3 (4 Dim)**	**Model 4 (5 Dim)**
D1	-2.637 (0.000)	-2.705 (0.000)	-2.862 (0.000)	-1.982 (0.000)
D2	1,571 (0.000)	1.389 (0.000)	1.069 (0.005)	-0.336 (0.386)
D3		0.944 (0.005)	-0.374 (0.290)	-1.253 (0.003)
D4		-	1.198 (0.004)	2.315 (0.000)
D5		-		-0.643 (0.116)
Constante	-0,106 (0.899)	-0.294 (0.067)	-0.118 (0.889)	-0.142 (0.435)
R^2 (Nagelkerke)	0,389	0,4	0,412	0,452
R^2 (Cox&Snell)	0.295	0.299	0.309	0.339

Table 3b: Logistic Regressions on Agreement (Group 2)

Statistical results for both groups suggest a three-dimensional solution, which is confirmed by the interpretation in chapter C.4. Furthermore, no significant differences between the two groups, regarding the variables used in the further

analysis, are found (Appendix Table A1). The advantages of MDS thus fully support our analysis and data in terms of validity as well as reliability. Consequently, for the following analysis, the datasets of the two groups have been merged.

C.4) Interpretation of Dimensions, Utilities, and Hypothesis

The formation of our three dimensions follows a strict analysis and interpretation of (dis)similarities between items, with the goal being to identify coherent patterns in the data (Pinkley, Gelfand et al. 2005; Srnka 2007). By using MDS, each data item is represented as data dot in the multidimensional space and consequently more or less closely related to a specific dimension. Items may be represented by different dimensions to a different extent, which however allows us to identify inter-dimensional relationships more easily. This attribute of MDS is also referred to as data fuzzieness (Rust and Cooil 1994; Varki, Cooil et al. 2000) and constitutes a major advantage over common qualitative analysis methods.

Additionally to the results of the qualitative analysis, we used information provided by raters to identify and define the dimensions. This was possible as we asked our raters not only to sort messages according to emotional similarities, and rate these messages on a seven-point scale according to emotional valence and strength, but also to provide a short description for each informational category that was identified and used by the raters.

Furthermore we had to "synchronize" the dimensions we obtained by our analysis, so that the meaning of the dimensions of the two groups is coherent (Table 4a).

Group 1	Group 2
D2 (pleasure vs. displeasure)	D1 (pleasure vs. displeasure)
D3 (solidarity vs. Conflict)	D2 (solidarity vs. Conflict)
D1 (dominance vs. submission)	D3 (dominance vs. submission)

Table 4a: Inter-group dimension adaptation

To facilitate and improve the presentation of further analysis and discussions, the dimensional denomination for group 1 will be adopted to group 2. Hence from now on, dimensions will be referred to as follows:

Dimensional Denomination
D1 (pleasure vs. displeasure)
D2 (solidarity vs. Conflict)
D3 (dominance vs. submission)

Table 4b: Common Dimensional Denomination

The new ordering and adaptation of dimensions partly reflects the strength and overall "importance" of the dimension with respect to the data analyzed.

C.4.1) Dimension 1: Pleasure vs. Displeasure

Dimension 1 reflects pleasure vs. displeasure, also commonly referred to as valance in dimensional representations of emotions. Studies investigating the emotional structure of language altogether acknowledge the existence of this dimension of affect as well as its bipolarity (Bush 1973; Neufeld 1975; Neufeld 1976; Russell 1978; Russell 1980; Russell and Bullock 1985; Feldman Barrett and Russell 1999; Kring, Barrett et al. 2003; Feldman Barrett and Niedenthal 2004). Especially empirical studies based on MDS provide strong evidence for this dimension of valence.

Specific emotions on the displeasure pole of this dimension are for example anger, frustration, or annoyance (Russell 1980). These and similar emotions are reflected in messages loading high (≥ -0,5) on this pole of the dimension.

Message ID	Factor Loading	Message
3042	-0,905	Dear Mr. X. Here is my new offer to you. As it stands, returns are non-negotiable. We simply are unwilling to pay for your quality problems. As it is you should know that if your quality is not up to par, our contract will not be renewed. Thank you. Y
4072	-1	Mr. X, I don't really think that you know what your saying. You have gotten what you wanted on every issue. I can't see where I have gained something. I'm sorry that we were not able to reach an agreement on this issue. I will terminate this negotiation first thing tomorrow.

Table 5a: Message examples for displeasure

The opposite end of this dimension represents positive emotions such as being excited, happy, glad, or pleased (Russell 1980). These and similar emotions are reflected in messages loading high (≥ 0,5) on this pole of the dimension.

Message ID	Factor Loading	Message
2021	0,752616	It has been a pleasure negotiating with you. We should be able to do a lot of business between our companies in the future. Have a great weekend - I think we will both be happy to take this agreement back to our respective companies. Y
2089	0,669185	Y, It seems we have reached a very good solution, now that I realize the importance of return policy to you. I accept your latest proposal. Itex Manufacturing looks forward to working with Cypress Cycles. I enjoyed doing this negotiation with you. Take care! / X

Table 5b: Message examples for pleasure

The above interpretation is further supported by additional information obtained from raters. Messages loading high on the pleasure pole have been evaluated as being emotional positive (mean = 2,1628 for group 1, and mean = 2,1855 for group 2) whereas messages loading high on the displeasure pole have been evaluated as being emotional negative (mean = 4,0201 for group 1, and mean = 5,2176 for group 2).

Group 1	D1 > |0,5|	N	Mean	Standard Deviation	Standard Error of Mean	Sig.
Emotion rating	Mess. ≤ -0,5 on D1	26	4,0201	,68527	,13439	,000
	Mess. ≥ 0,5 on D1	31	2,1628	,73257	,13157	,000
Group 2	**D1 > |0,5|**	**N**	**Mean**	**Standard Deviation**	**Standard Error of Mean**	**Sig.**
Emotion rating	Mess. ≤ -0,5 on D1	31	5,2176	,42680	,07666	,000
	Mess. ≥ 0,5 on D1	22	2,1855	,43977	,09376	,000

Table 6: Overall emotion rating for D1

Furthermore raters characterized and described messages representing similar emotions for example as follows:

Dimensional Characteristic	Description from raters
Pleasure	Pleasant, cordial, positive, gentle, polite, thankful, happy, friendly
Displeasure	Cold, angry, impolite, nerved, taunting, aggressive, offensive

Table 7: Description of raters for the pleasure vs. displeasure dimension (D1)

Another dimension, arousal, traditionally combined with the valence dimension (Bush 1973; Neufeld 1975; Neufeld 1976; Russell 1978), did not specifically emerge in the present study. A possible explanation is that low-arousal emotions such as bored, droopy, tired, sleepy, or relaxed are not present dominantly in negotiations (especially in negotiations under time-constraints such as in the present study). Hence, due to the lack of an anti-pole to high arousal emotions, a circumplex structure (Russell 1980) on the valence and arousal dimensions did not emerge. Rather, valence and arousal is condensed to one dimension with the end poles being the valence (positive or negative), and the strength of the loading on this dimension representing and substituting the arousal dimension. In short, this means that messages located at the endpoints of this dimension are strongly negative or positive emotional, while messages close the center (around zero) are of low arousal or intensity. The omission of the arousal dimensions, as in the present study, has also been discussed in theory (Reisenzein 1994; Feldman Barrett and Russell 1999). However, research and discussions on this topic are still rather general and do not completely account for the special case of electronic negotiations. This though, is an important point in this discussion, as electronic negotiations are situations defined by rather high levels of arousal. Hence the

prominent dimension of arousal almost cancels out, simply because it remains high throughout the negotiation process, and thus lacks an anti-pole. This interesting discussion though, is beyond the scope of this work and will not be recessed further here.

Message ID	Factor Loading	Message
3064	-0,099463	Hi! We have reviewed your offer and find it uncompetitive compared to other suppliers in the marked that we have spoken to. As you can see from our new offer, we have accepted an extended delivery time. Since we are in the business of making high quality bikes we cannot accept less than full return of damaged goods. This reflects our high quality standards regarding key components. Best regards, X
2006	0,0745	Dear X, This is my offer: do you think it is interesting? It reflects yours: we can start from this point or, more wisely, try to understand which issues are more important for each of us and then start discussing about options. I leave to you the wisdom. Best regards, Y

Table 8: Message examples for low arousal

C.4.2) Dimension 2: Solidarity vs. Conflict

The second distinct dimension that emerged is termed solidarity vs. conflict, as the interpretation is "more relevant to the social, interpersonal meanings of emotion" (White 2000). Negotiations are not only interpersonal by definition but also comprehend conflict and solidarity instances as emotional pendants to specific negotiation behavior. In this dimension, solidarity is strongly linked with integrative behavior and conflict is closely connected to distributive behavior, and thus reflects a win-win, a win-lose, or even a lose-lose situation. Accordingly, messages loading high on the solidarity pole (Table 9a) express support for common ground, and value solutions that are beneficiary for both parties. Contrary, messages loading high on the opposite conflict pole (Table 9b) express dissatisfaction, and point to unequal or unfair propositions of solutions.

Message ID	Factor Loading	Message
1068	1	Dear Y, I am pretty glad to tell you that I accept your last offer. I am sure that our agreement is the best both of us could expect. It confirms my impression that our two companies are complementary and I have no doubt this opportunity is the beginning of a long collaboration. Sincerely yours, X / Itex Manufacturing
2048	0,797599	X, thank you for your offer. I agree with you that the sales opportunities for your new line of bicycles with out parts is tremendous. It is an opportunity for Itex and Cypress to engage in a relationship that will truly benefit both sides. We want to fulfill your manufacturing cycle time requirements while making business decisions that will ensure a long term relationship between our companies. We feel that with an agreement between Itex and Cypress, we will be able to improve our product beyond it already exceptional performance, and be a first tier supplier to Cypress for years to come. In order to accomplish this, we need to take the appropriate steps to ensure a balance between revenues and invest at this time. Please review our counter offer, and I look forward to hearing from you soon.

Table 9a: Message examples for solidarity

Message ID	Factor Loading	Message
3014	-0,720954	If you agree to this, we will both benefit. 60 days is not possible. 20 days is a struggle, but agreeable under only these conditions. Refund policies in this industry are 10% standard, we are not dealing with porcelain dolls here, our products are not fragile. If indeed there is any damage, it will be a result of a serious error on either my part or yours. If you expect me to carry some of the burden of your sales lag, to which I agree, then I expect you to carry some of the risk in the returns.
4016	-0,714081	Hello Y, I don't really understand. I have already assured you that the supplied component will de defect free (and spoilage free) and that is the reason I had agreed to the full price return terms. I assure you that you will not need any quality control procedures to be done. As far as prices go, I have quoted the most reasonable prices for the quality I am supplying. You could very well compare it with any of my competitors' prices. I am sure you are not going to compromise on quality for lower prices. thanx,

Table 9b: Message examples for conflict

Interestingly and importantly, messages loading high on the solidarity pole (Table 10) also contain rejections. However, these rejections are more of a constructive nature, are accompanied by positive emotions, and convoy suggestions of viable solutions. Rejections loading high on the opposite conflict pole, yet still are rather negative, are accompanied by a negative emotional tenor, and are used to block or diffuse the negotiation process.

Message ID	Factor Loading	Message
2078	0,781032	Hello: Thank you for providing us with an offer. Upon reading the opening offer, we were concerned that our research had perhaps misdirected us to Itex. We understood Itex to be a cost competitive producer, which for us is critical. Unfortunately we see no correlation to our needs in the opening offer. Our market plans for this cycle are focused on low cost. If we aren't low cost, our customers will not buy from us and we will have no continuing need for Itex parts. So although a higher price might be better for Itex in the short term, a lower price will provide a sustained relationship, with more long-term profit for your company. You'll notice that on our opening offer we demonstrated flexibility on payment terms, and now we offer movement on delivery terms. We were very pleased to see your confidence on your quality. Commitment to full price returns, therefore, should be okay with you. Any spoilage would, in effect, just increase the price of usable parts. Low cost is extremely important, especially in our start-up phase of this new venture. We look forward to hearing from your again. Respectfully, X, V.P. Operations

Table 10: Message example for a high solidarity rejection

Consistent with the interpretation, messages loading high on the conflict pole have been evaluated by raters as being significantly more negative (mean = 4,9841 for group 1, and mean = 4,2393 for group 2) than those messages loading high on the solidarity pole (mean = 2,4617 for group 1, and mean = 2,6670 for group 2).

Group 1	**D2 > |0,5|**	**N**	**Mean**	**Standard Deviation**	**Standard Error of Mean**	**Sig.**
Emotion rating	Mess. ≤ -0,5 on D2	32	4,9841	,91576	,16189	,000
	Mess. ≥ 0,5 on D2	27	2,4617	,61821	,11897	,000
Group 2	**D2 > |0,5|**	**N**	**Mean**	**Standard Deviation**	**Standard Error of Mean**	**Sig.**
Emotion rating	Mess. ≤ -0,5 on D2	35	4,2393	,69203	,11697	,000
	Mess. ≥ 0,5 on D2	33	2,6670	,63191	,11000	,000

Table 11: Overall emotion rating for D2

Additionally, raters characterized and described messages representing similar emotions for example as follows:

Dimensional Characteristic	Description from raters
Solidarity	Optimistic, insightful, understanding, compromising, enthusiastic
Conflict	Attacking, indifferent, irritated, repellent, putting the other under pressure

Table 12: Description of raters for the solidarity vs. conflict dimension (D2)

C.4.3) Dimension 3: Other- vs. Self-Oriented Behavior

Similarly to Russell and Mehrabian (1977) a third dimension representing dominance vs. submission was identified. As the terminology of Russell and Mehrabian (1977) is somehow misleading in the context of negotiations, we denominated the poles of the dimension other- vs. self-oriented behavior.

Our interpretation of this third dimension follows the logic of the dual concern model (Pruitt and Rubin 1986). We however, condense other- vs. self-oriented behavior into one dimension, whereas Pruitt and Rubin view these two properties as distinct dimensions. With respect to the present work and research this is not considered a limitation, as this third dimension interacts with the prior two dimensions and thereby constitutes a different contextual quality than in the dual concern model's case.

Submission or other-oriented behavior is characterized by interest in the counterpart's priorities, concern for others or a stronger focus on problem solving behavior. This is reflected in messages loading high on this pole (Table 13a).

Message ID	Factor Loading	Message
4025	0,951085	Hello Y, My name is X. I have decided that we should understand each other a little more before throwing numbers around. Coincidently I am an avid mountain biker and would like very much to see some of our components on your bikes. Given my experience with bikes I can assure you that our gears will be more than rugged enough to stand the extreme pressures that your bikes will be put through. Another benefit to a relationship between our companies is the compatibility of your product with our market. Located near some of the best riding trails in Canada, mountain biking is a huge market around us. By giving us the opportunity to supply you with our gears, our local bikers would most likely be very excited to try your product. We shall discuss the technical issues of a contract after sharing our views of the opportunities available to both our companies. I look forward to a pleasant negotiation, Sincerely X
2087	0,732098	Y, I think we're getting really close to a workable solution. I liked the last offer and your willingness to accept a longer delivery. Nevertheless, I don't mind still committing to a 30-day delivery at the price you suggest, but it will be harder for me guarantee quality. Thus, the only thing I have changed on your last offer is the spoilage/return policy. In other words, I can get you the price you desire if you are willing to work with slightly lower quality guarantees. Does this work for you? I'll look forward to your reply. // X

Table 13a: Message examples for other-oriented behavior

Dominance or self-oriented behavior on the other hand is characterized by a focus on own interests, arguments supporting the own position, and statements about the superiority of the own product or company. This behavior and orientation is reflected in messages loading high on this opposite pole of the dimension (Table 13b).

Message ID	Factor Loading	Message
4079	-0,949826	X, it looks like our negotiation has been brought to a standstill. I can only tell you that our company produces quality products, and I have to spend time with hundreds of customers each day. If you are not happy with my offer, you may always compare with other suppliers before coming back to me.
3003	-0,923452	X, This is my final offer, as I have said, Cypress will not be interested in any price above 3.98. Take it or leave it, it is your choice. We have other possible suppliers who would like to do business with us. Y

Table 13b: Message examples for self-oriented behavior

Messages loading high on the other- vs. self-oriented behavior dimension, have been evaluated by raters as being rather emotionally neutral. Still, other-oriented behavior (mean = 2,4825 for group 1, and mean = 3,3508 for group 2) has been

evaluated as significantly more positive than self-oriented behavior (mean = 5,5750 for group 1, and mean = 4,1269 for group 2).

Group 1	D3 > |0,5|	N	Mean	Standard Deviation	Standard Error of Mean	Sig.
Emotion rating	Mess. ≤ -0,5 on D3	29	5,5750	,62975	,11694	,000
	Mess. ≥ 0,5 on D3	7	2,4825	,35018	,13236	,000
Group 2	**D3 > |0,5|**	**N**	**Mean**	**Standard Deviation**	**Standard Error of Mean**	**Sig.**
Emotion rating	Mess. ≤ -0,5 on D3	33	4,1269	,93058	,16199	,000
	Mess. ≥ 0,5 on D3	31	3,3508	,70719	,12702	,000

Table 14: Overall emotion rating for D3

The bipolar distinction between these two poles is also supported by the raters' characterization of the message categories:

Dimensional Characteristic	Description from raters
Other-oriented behavior	Obliging, interested, cooperative
Self-oriented behavior	Demanding, dominant

Table 15: Description of raters for the other- vs. self-oriented behavior dimension (D3)

C.4.4) Utilities, phase model theory, and hypothesis formulation

Additionally to the analysis of the three dimensions we used the utility values attached to each message sent, to complement our research. These utilities constitute the "value" of the offer to a negotiator and evolved throughout the negotiation process, as they present a numerical value for the item offers in the negotiation process. Thus the present study is not only based on verbal and linguistic factors, but also on the value of the utilities directly provided by the negotiators themselves. We used the utility values to calculate utility differences, which introduce a value-based measure for the difference between the offers of the negotiators, and consequently to some extent the difference to a possible

agreement. Based on the assessment of the utility values we constitute the following hypothesis:

H1: Negotiations in which an agreement was are characterized by a faster decline of utility differences, as compared to negotiations in which no agreement was reached.

Based on the discussion of theory in chapters A and B, we use our first general empirical results discussed beforehand in this chapter, together with insights from phase model theory (Douglas 1962; Gulliver 1979; Zartman 1982; Bednar and Curingon 1983; Abbott and Forrest 1986; Holmes 1992), to develop our next hypothesis. Phase model theories are particularly useful in our case due to their prescriptive and descriptive quality regarding negotiation processes and especially negotiation stages and phases. Phase models generally identify three major negotiation phases, being an initiation, a problem solving, and a resolution phase. Descriptive phase models posit that events, and thus negotiations, follow an ordered sequence of phases. Consequently it is possible to deduct a specific sequence of (overlapping) phases and uncover procedural dynamics that account for change and therefore mark and induce the transition to another (negotiation) phase (Walton and McKersie 1965; Bednar and Curingon 1983). In phase modeling it is thus essential to be able to identify negotiation phases as well as the dynamics causing a shift from one phase to another (Holmes 1992).

The descriptive phase model of Gulliver (1979) is built upon these assumptions and strictly defines a negotiation as the sum of its negotiation phases (material causality). As each negotiation phases leads to another phase (efficient causality), they shape and define the whole negotiation conjoined (formal causality). Ultimately, since the beginning of a negotiation initiates the first negotiation phase, negotiators seek to conclude each and every phase in order to achieve a final outcome (final causality).

Consequently, we develop our hypothesis accordingly in order to identify negotiation phases and dynamics. The term negotiation in the following hypothesis hence corresponds to the definition given by Gulliver (1979).

H2a: Negotiations in which an agreement was reached are always (in all negotiation phases) more positively emotional (high in pleasure) than negotiations in which no agreement was reached, whereas negotiations in which no agreement was reached are always more negatively emotional (high in displeasure) than negotiations in which an agreement was reached.

H2b: For negotiations in which an agreement was reached an overall emotional pattern is observable. First emotions are positive, then emotions become more negative, and finally positivity of emotions increases again.

H2c: For negotiations in which no agreement was reached a negative emotional pattern is observable.

H3a: Negotiations in which an agreement was reached are characterized by higher levels of solidarity between negotiators, than negotiations in which no agreement was reached, whereas negotiations in which no agreement was reached are characterized by higher levels of conflict between negotiators, than negotiations in which an agreement was reached.

H3b: Negotiations in which an agreement was reached are characterized by an increase in solidarity.

H3c: Negotiations in which no agreement was reached are characterized by an increase in conflict.

H4a: In negotiations in which an agreement was reached, negotiators are more other-oriented, than in negotiations in which no agreement was reached, whereas in negotiations in which no agreement was reached, negotiators are more self-oriented, than in negotiations in which an agreement was reached.

H4b: Negotiations in which an agreement was reached are characterized by an increase in other-oriented behavior.

H4c: Negotiations in which no agreement was reached are characterized by an increase in self-oriented behavior.

C.5) Results

As specified earlier, the results presented in this chapter are obtained by the use of MDS. All three dimensions were adjusted if necessary (multiplied by -1) so that positive values represent values closer to the positive pole of a dimension and negative values represent the opposite.

Table 16 outlines the overall values for agreements as well as no agreements for all messages within the negotiation time-line. You could also say that it shows the overall emotional climate of negotiations. All values are highly significant.

	Agreement	N	Mean	Standard Deviation	Standard Error of Mean	Sig.
D1 (pleasure / displeasure)	no agreement	30	-,1427	,15398	,02811	,000
	agreement	30	,1817	,19296	,03523	
D2 (solidarity / conflict)	no agreement	30	-,1527	,21787	,03978	,000
	agreement	30	,1667	,16985	,03101	
D3 (other- / self-oriented)	no agreement	30	-,1357	,15982	,02918	,000
	agreement	30	,1473	,15505	,02831	
Utility Difference	no agreement	30	,6347	,21985	,04014	,000
	agreement	30	,3983	,11989	,02189	

Table 16: Overall difference between agreements and no agreements

As can be seen in Table 16, negotiations in which no agreement was reached are significantly worse in all dimensions as well as according to the utility difference. The exact opposite is true for negotiations in which an agreement was reached.

The next chapters discussing our results will be more detailed and focused on specific steps within the negotiations, and thus acknowledge the process character of negotiations and make use of it for analytical purposes, as suggested by phase model theory.

C.5.1) An example of graphical representations of selected negotiations

In order to provide a basic illustration and introduction to our data analysis, this chapter will present graphical representations of the obtained results, of two illustrative negotiation examples. This is interesting since the closer examination of examples highlights the existence of negotiation phases and may draw attention to the advantages of this method of analysis. The main analysis will be presented in the next chapter.

Diagram 1 and diagram 2 are examples for negotiation trends incorporating all three dimensions as well as the utility difference, over the whole negotiation time line, for an agreement as well as a no agreement negotiation.

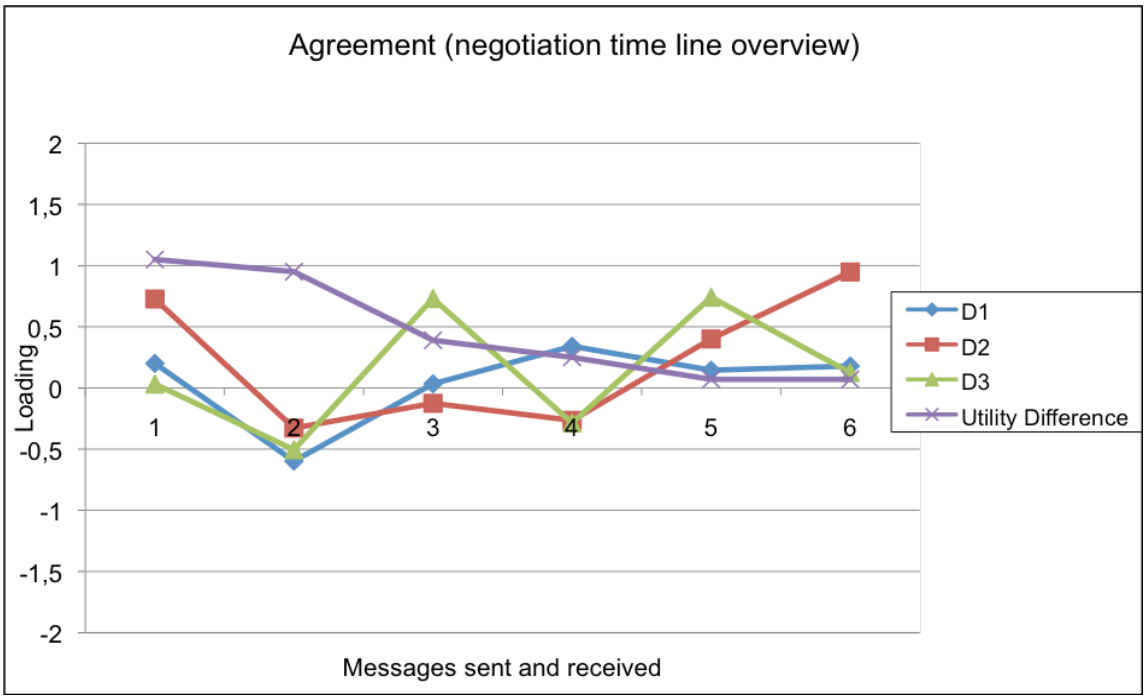

Diagram 1: Graphical representation for an agreement negotiation example (Negotiation ID: 1654)

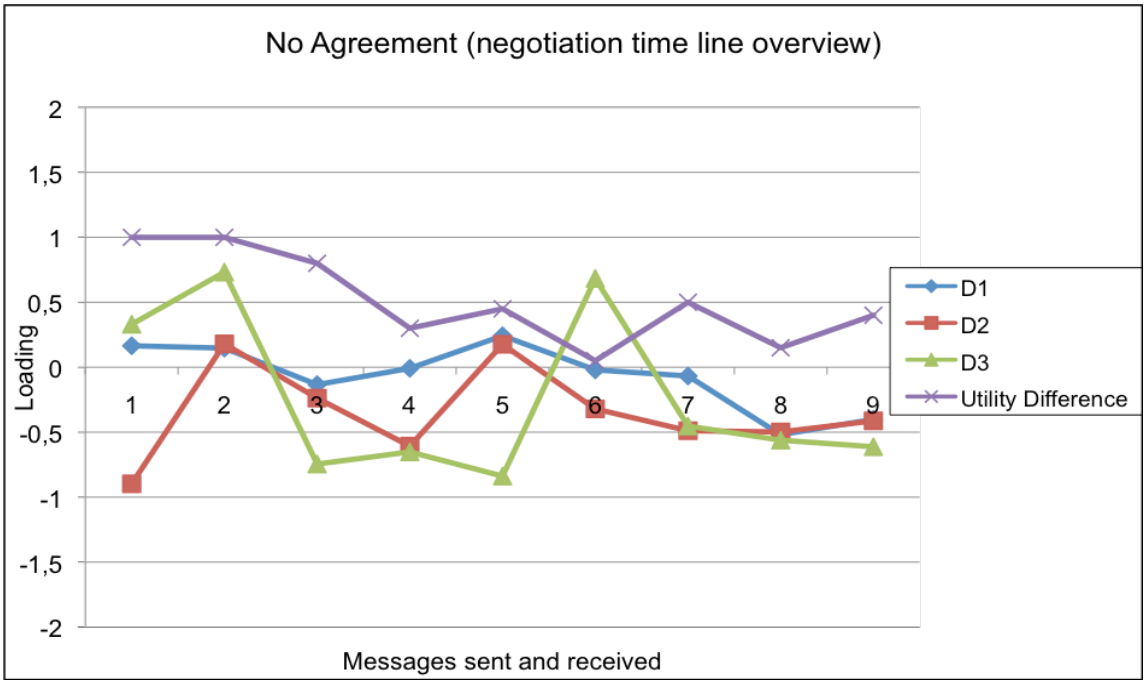

Diagram 2: Graphical representation for a no agreement negotiation example (Negotiation ID: 1606)

For the negotiation example in which an agreement was reached (Diagram 1), we see a distinct development of the pleasure vs. displeasure (D1) dimension, the solidarity vs. conflict dimension (D2), as well as the utility difference. Dimension 3 (other- vs. self-oriented behavior) shows very volatile behavior, but reaches its initial value at the end of the negotiation again.

The negotiation example in which no agreement was reached (Diagram 2) shows an overall more volatile development, as well as decreasing values for D1 and D3. Dimension 2 does not seem to become worse, but also does not become positive. The utility difference develops positively but does not reach an as positive value as for the agreement negotiation.

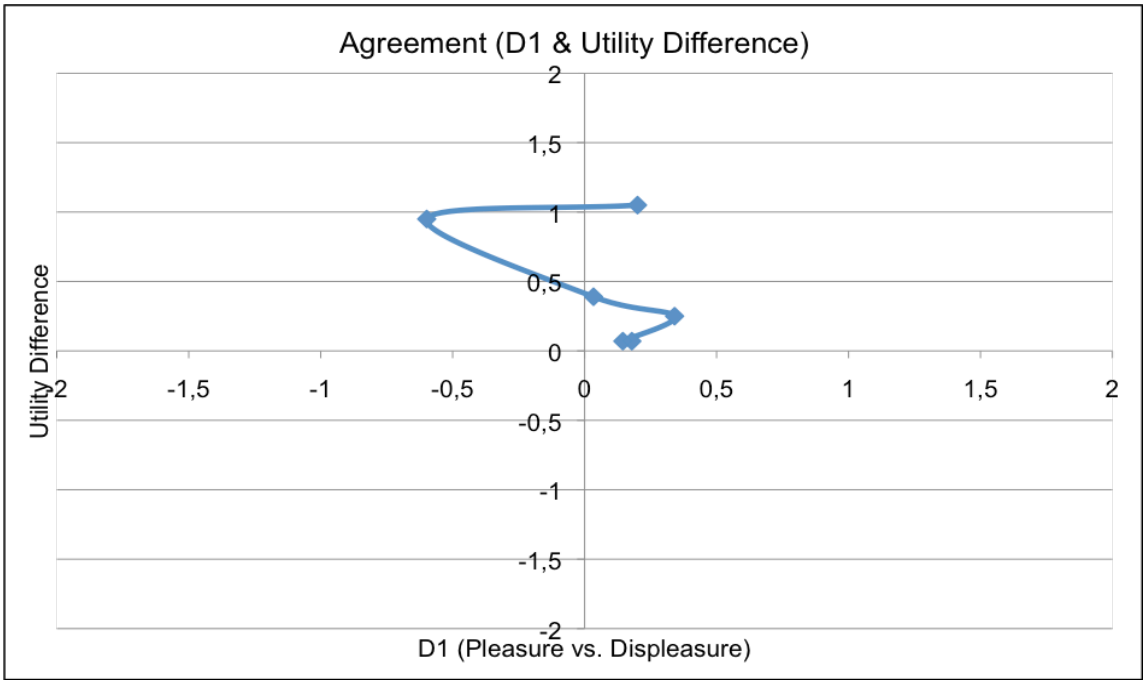

Diagram 3: Graphical representation of D1 and the Utility Difference for an agreement negotiation example (Negotiation ID: 1654)

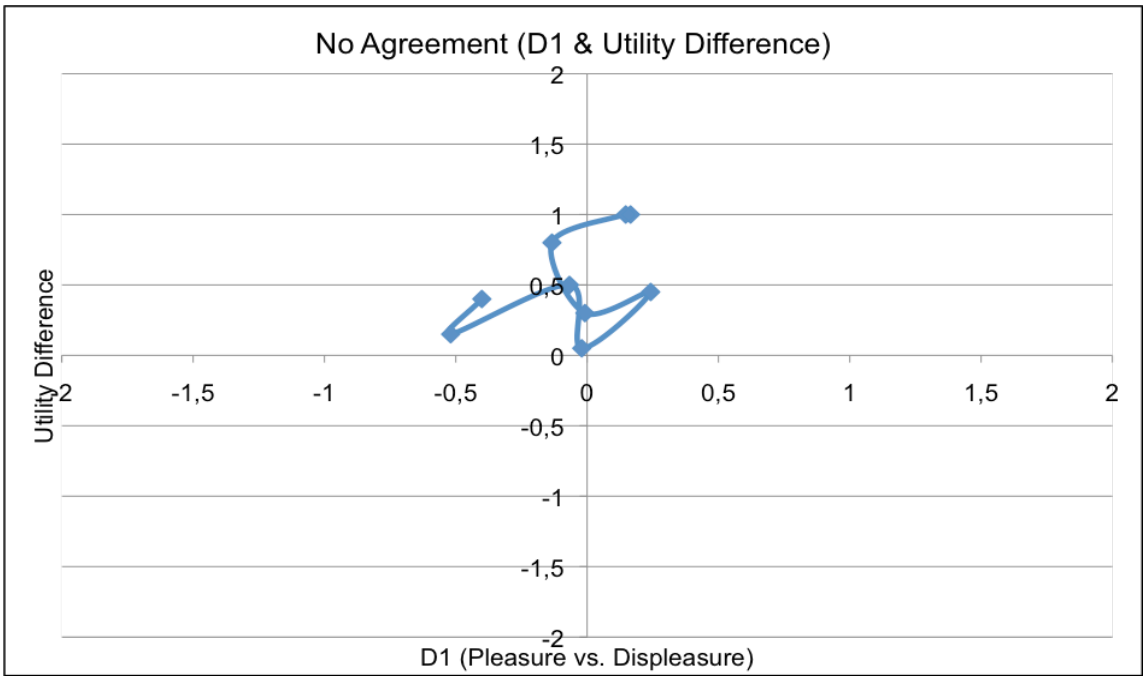

Diagram 4: Graphical representation of D1 and the Utility Difference for a no agreement negotiation example (Negotiation ID: 1606)

Graphical comparisons (every dot represents the exchange of message pairs) of dimension 1 with the utility difference for both negotiation examples (diagram 4 & 5) indicate support for our initial analysis. In the example for the agreement

negotiation, we see an only temporary decrease of the value for the D1, as well as a steady decrease of the utility difference. The example for the no agreement negotiation shows an overall steady decrease for D1 as well as for the utility difference. In the case where no agreement was reached, we observe a higher utility difference as well as a higher displeasure value at the end of the negotiation.

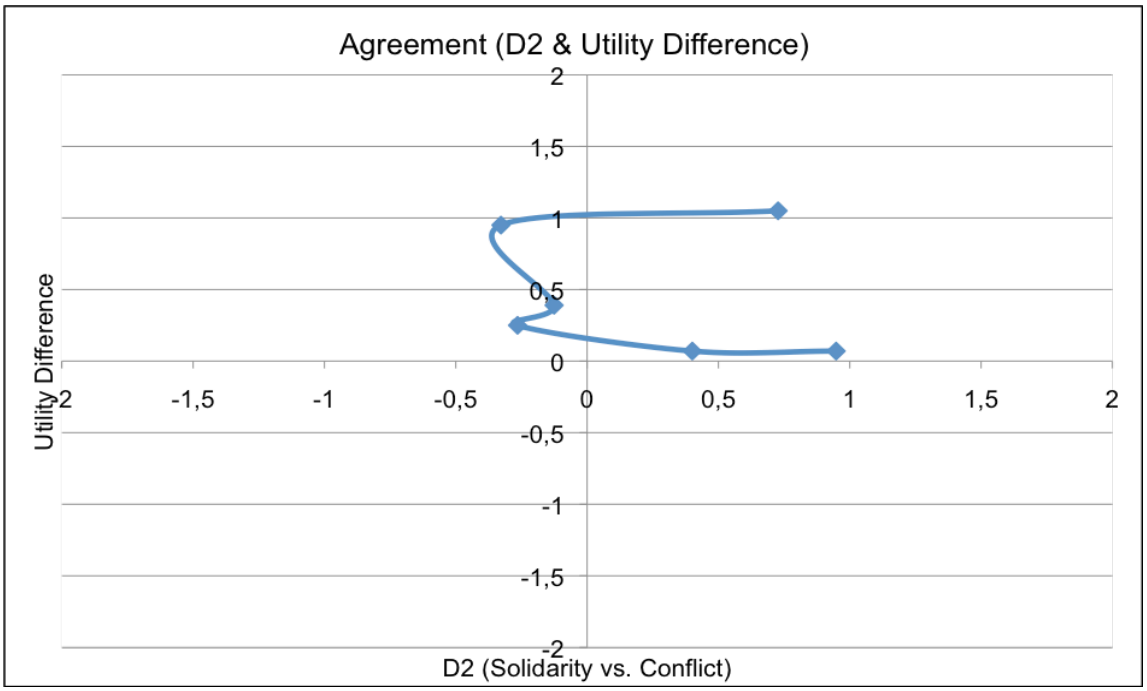

Diagram 5: Graphical representation of D2 and the Utility Difference for an agreement negotiation example (Negotiation ID: 1654)

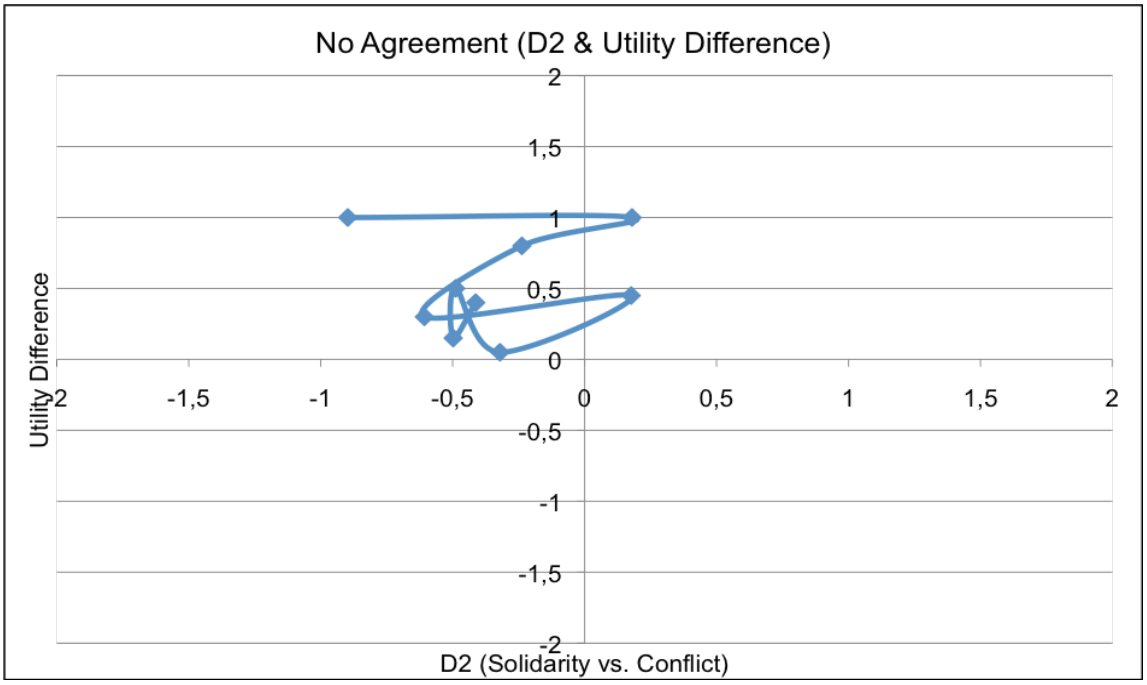

Diagram 6: Graphical representation of D2 and the Utility Difference for a no agreement negotiation example (Negotiation ID: 1606)

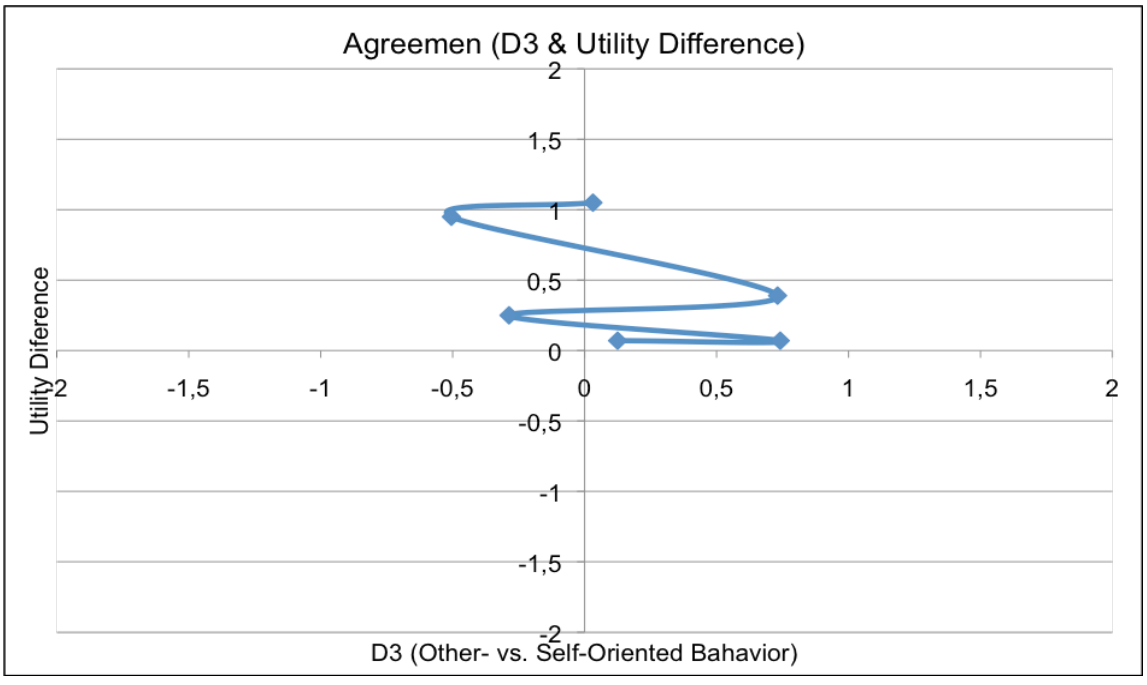

Diagram 7: Graphical representation of D3 and the Utility Difference for an agreement negotiation example (Negotiation ID: 1654)

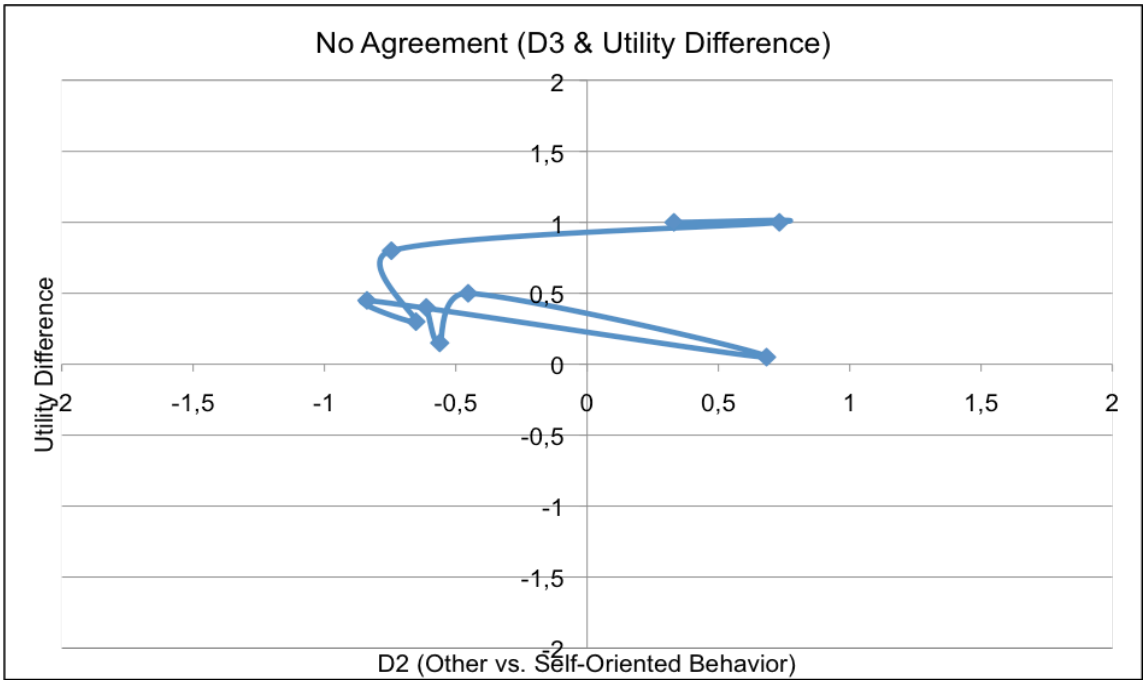

Diagram 8: Graphical representation of D3 and the Utility Difference for a no agreement negotiation example (Negotiation ID: 1606)

Diagram 5 and 7, representing the agreement example, show an overall increase in D2 and almost no increase in D3, whereas the utility difference strongly decreases. For the no agreement example, represented by diagram 6 and 8, we see a slight increase in D2 and a strong decrease in D3.

Overall, in the agreement example every message exchange is followed by a decrease in the utility difference, which cannot be observed for the no agreement example. Also the no agreement negotiation seems to be defined by a lot more volatile behavior of the negotiators. By looking at these two examples we may grasp an understanding of a possible negotiation pattern with respect to our three dimensions as well as regarding the development of the utility difference. Likely procedural patterns will be further examined in the forthcoming chapters.

C.5.2) Main analysis: Comparing the negotiation phases within and between successful and failed negotiations

In order to assess the emotional dynamics in electronic negotiations, we first compared the distinct negotiation phases between successful and failed negotiations. In a second step we refined our analysis by comparing the negotiation phases among each other within the respective negotiation groups.

C.5.2.1) Negotiation phase comparisons between successful and failed negotiations

In line with phase model theories, we observe three major negotiation phases (Holmes 1992): A negotiation initiations phase, a core phase (or problem solving phase), and a conclusion phase (or resolution phase).

In our case the negotiation initiation and core phase comprise the first two and the second two messages sent and received by each negotiator. We compared the first two messages and the second two messages for all dimension as well as for the utility difference, as shown in Table 17. The grey areas mark non-significant results.

First Two Messages	Agreement	N	Mean	Standard Deviation	Standard Error of Mean	Sig.
D1 (pleasure / displeasure)	no agreement	30	,0890	,29400	,05368	,016
	agreement	30	,2630	,24776	,04524	
D2 (solidarity / conflict)	no agreement	30	-,1267	,30958	,05652	,134
	agreement	30	-,0113	,27658	,05050	
D3 (other- / self-oriented)	no agreement	30	,1053	,24866	,04540	,143
	agreement	30	,1993	,24203	,04419	
Utility Difference	no agreement	30	,9177	,29504	,05387	,015
	agreement	30	,7443	,23884	,04361	
Second Two Messages	**Agreement**	**N**	**Mean**	**Standard Deviation**	**Standard Error of Mean**	**Sig.**
D1 (pleasure / displeasure)	no agreement	30	-,1920	,22443	,04097	,007
	agreement	30	-,0170	,25533	,04662	
D2 (solidarity / conflict)	no agreement	30	-,1607	,32668	,05964	,000
	agreement	30	,1977	,21752	,03971	
D3 (other- / self-oriented)	no agreement	30	-,1630	,33316	,06083	,002
	agreement	30	,0940	,26163	,04777	
Utility Difference	no agreement	30	,6923	,24034	,04388	,000
	agreement	30	,3753	,21018	,03837	

Table 17: Comparison of the first and second two messages

Considering the first two messages both, the agreement as well as the no agreement group, start with emotional positive messages (D1). For the agreement group however, the first message is significantly more positive (mean = ,2630) than for the no agreement group (mean = ,0890). Utility differences draw a similar picture and would support findings of a more positive negotiation start of the agreement group. Dimension 2 and dimension 3 show no significant differences for the first two messages between the agreement and the no agreement group, and would support similar negotiation starts considering these two dimensions.

As all negotiations had the same starting conditions, we expected no difference between the agreement and the no agreement group. Interestingly, successful negotiations initially start with a higher level of positive emotions as well as a lower utility difference. Thus, it might be hypothesized that the initial message(s) already "prime" the further course of the negotiation. The difference between successful and failed negotiations, however, becomes more pronounced when considering the further development of the negotiations.

The results for the second two messages, show that emotions are negative (D1) in the agreement (mean = -,0170) as well as the no agreement group (mean = -,1920). Furthermore the no agreement group develops an atmosphere of conflict (D2)

with negotiators being more self-oriented (D3). The agreement group on the other hand is characterized by an atmosphere of solidarity (D2) with people being other-oriented (D3). Together with the more emotional negative atmosphere (D1) in the agreement group the rather low value of the other-orientation dimension (D3), when compared to the level of solidarity (D2), may indicate that negotiators in the agreement group enter a phase of constructive criticism. This result is further supported by the negotiators' utilities, which show a very positive value for the utility difference between negotiators. Emotions possess a signaling function and consequently it seems as if negotiators used emotions accordingly (explicitly or implicitly), and that their counterparts also interpreted them correctly and as intended, in the agreement group. The no agreement group, however, simply shows negative values in all dimensions and thus contrasts the results of the agreement group as expected. One reason for this may also be the misinterpretation of emotions and their function as signal.

Overall we observe that upon entering the negotiation core phase, failed and successful negotiations develop significantly different. In this phase successful negotiations are characterized by negative emotions but also by solidarity and other-oriented behavior. In failed negotiations however, negotiators show negative emotions and conflicting as well as self-oriented behavior.

The last negotiation phase, the conclusion phase, is represented by the last two messages being sent and received by negotiators (Table 18). All results are significant.

Last Two Messages	Agreement	N	Mean	Standard Deviation	Standard Error of Mean	Sig.
D1 (pleasure / displeasure)	no agreement	30	-,2040	,34719	,06339	,000
	agreement	30	,3063	,24931	,04552	
D2 (solidarity / conflict)	no agreement	30	-,2747	,32244	,05887	,000
	agreement	30	,2143	,31846	,05814	
D3 (other- / self-oriented)	no agreement	30	-,2310	,33159	,06054	,000
	agreement	30	,1487	,24111	,04402	
Utility Difference	no agreement	30	,4633	,25548	,04664	,000
	agreement	30	,1667	,12864	,02349	

Table 18: Comparison of the last two messages

As can be seen in Table 18 all three dimensions as well as the utility values draw a very distinct picture. The no agreement group is characterized by strongly

negative emotional messages, an atmosphere of severe conflict, and highly self-oriented behavior. Results for the agreement group suggest contrary conclusions. Here the atmosphere is very positively emotional, is characterized by strong solidarity between negotiators, and is also shaped by negotiators' other-oriented behavior. Utility values support the obtained results and show that the utility difference in the agreement group is by far smaller than in the no agreement group. Altogether a clear distinction between the agreement and the no agreement group is possible due to the three dimensional solution as well as the utility differences.

Altogether these results, together with those of the last chapter, support our hypothesis H2a, concerning dimension 1 (pleasure vs. displeasure). We can clearly observe that negotiations in which an agreement was reached are always characterized by more positive emotions than negotiations in which no agreement was reached.

For dimension 2 (solidarity vs. conflict) and dimension 3 (other- vs. self-oriented behavior) almost similar results can be observed. The difference however is, that for these two dimensions no significant differences for the first two messages between the agreement and the no agreement group could be found. Then again, a comparison of the second and the last two messages shows significant differences between the agreement and the no agreement group. Results therefore suggest that negotiations start very similar and develop different dynamics after the first two messages being sent, which could be expected. Accordingly, hypothesis H3a and H4a are generally supported with the constraint being the negotiation initiation phase comprising the first two messages sent and received.

C.5.2.2) Negotiation phase comparisons within successful and failed negotiations

Additionally to the analysis of individual negotiation phases between the agreement and the no agreement group, we performed inter-phase comparisons (within the agreement and the no agreement group) to gain more insight into the

procedural character and development of negotiations as well as the negotiation phases inherent to them. This was done by pair wise comparisons of the results obtained beforehand. All grey marked results are non-significant.

Pair wise comparisons of the first and the second two messages reveal interesting initial developments. For the agreement group (Table 19) we can observe an initial drop in D1 (pleasure vs. displeasure) to a slightly negative value. At the same time, D2 (solidarity vs. conflict) strongly increases, whereas D3 (other- vs. self-oriented behavior) does not show any significant change. Also the utility difference strongly decreases (by almost 50%). For the no agreement group (Table 20), we can also observe a significant drop in D1, however to a strongly negative value in this case. D3 also develops significantly worse, whereas D2 does not show any significant change for the no agreement group. The utility difference also decreases for the no agreement group, however to a smaller extent (by almost 25%). Interestingly, the decrease in D1 for both the agreement as well as the no agreement group shows the same value in total (-0,28 for the agreement group, and -0,281 for the no agreement group).

	Paired comparison for agreements	Messages	Mean	N	Standard Deviation	Standard Error of Mean	Sig.
Agreement	D1 (pleasure / displeasure)	First two messages	,2630	30	,24776	,04524	,000
		Second two messages	-,0170	30	,25533	,04662	
	D2 (solidarity / conflict)	First two messages	-,0113	30	,27658	,05050	,001
		Second two messages	,1977	30	,21752	,03971	
	D3 (other- / self-oriented)	First two messages	,1993	30	,24203	,04419	,090
		Second two messages	,0940	30	,26163	,04777	
	Utility Difference	First two messages	,7443	30	,23884	,04361	,000
		Second two messages	,3753	30	,21018	,03837	

Table 19: Paired comparison of first two and second two messages for agreements

	Paired comparison for no agreements	Messages	Mean	N	Standard Deviation	Standard Error of Mean	Sig.
No Agreement	D1 (pleasure / displeasure)	First two messages	,0890	30	,29400	,05368	,001
		Second two messages	-,1920	30	,22443	,04097	
	D2 (solidarity / conflict)	First two messages	-,1267	30	,30958	,05652	,615
		Second two messages	-,1607	30	,32668	,05964	
	D3 (other- / self-oriented)	First two messages	,1053	30	,24866	,04540	,004
		Second two messages	-,1630	30	,33316	,06083	
	Utility Difference	First two messages	,9177	30	,29504	,05387	,000
		Second two messages	,6923	30	,24034	,04388	

Table 20: Paired comparison of first two and second two messages for no agreements

Considering the last negotiation phase, pair wise comparisons of the second and the last two messages also convey interesting developments. For the agreement group (Table 21) we observe a strong increase for D1, whereas D2 and D3 show no significant change. The utility difference also decreases strongly again. For the no agreement group (Table 22) we cannot observe any significant change in D1, D2, or D3. Only the utility difference decreases again, however by far not to the same extent as compared to the agreement group.

	Paired comparison for agreements	Messages	Mean	N	Standard Deviation	Standard Error of Mean	Sig.
Agreement	D1 (pleasure / displeasure)	Second two messages	-,0170	30	,25533	,04662	,000
		Last two messages	,3063	30	,24931	,04552	
	D2 (solidarity / conflict)	Second two messages	,1977	30	,21752	,03971	,798
		Last two messages	,2143	30	,31846	,05814	
	D3 (other- / self-oriented)	Second two messages	,0940	30	,26163	,04777	,357
		Last two messages	,1487	30	,24111	,04402	
	Utility Difference	Second two messages	,3753	30	,21018	,03837	,000
		Last two messages	,1667	30	,12864	,02349	

Table 21: Paired comparison of second two and last two messages for agreements

	Paired comparison for no agreements	Messages	Mean	N	Standard Deviation	Standard Error of Mean	Sig.
No Agreement	D1 (pleasure / displeasure)	Second two messages	-,1920	30	,22443	,04097	,805
		Last two messages	-,2040	30	,34719	,06339	
	D2 (solidarity / conflict)	Second two messages	-,1607	30	,32668	,05964	,108
		Last two messages	-,2747	30	,32244	,05887	
	D3 (other- / self-oriented)	Second two messages	-,1630	30	,33316	,06083	,277
		Last two messages	-,2310	30	,33159	,06054	
	Utility Difference	Second two messages	,6923	30	,24034	,04388	,000
		Last two messages	,4633	30	,25548	,04664	

Table 22: Paired comparison of second two and last two messages for no agreements

Finally we also looked at pair wise comparisons of the initial and the concluding negotiation phase (the first two and the last two messages). Here, for the agreement group (Table 23) we do not observe significant changes for D1 or D3. For D2 and the utility difference, we however note a significant and strong positive improvement. The no agreement group (Table 24) on the other hand, shows no significant change in D2, but a strong and significant decrease for the values of D1 and D3. The utility difference again decreases.

	Paired comparison for agreements	Messages	Mean	N	Standard Deviation	Standard Error of Mean	Sig.
Agreement	D1 (pleasure / displeasure)	First two messages	,2630	30	,24776	,04524	,408
		Last two messages	,3063	30	,24931	,04552	
	D2 (solidarity / conflict)	First two messages	-,0113	30	,27658	,05050	,010
		Last two messages	,2143	30	,31846	,05814	
	D3 (other- / self-oriented)	First two messages	,1993	30	,24203	,04419	,367
		Last two messages	,1487	30	,24111	,04402	
	Utility Difference	First two messages	,7443	30	,23884	,04361	,000
		Last two messages	,1667	30	,12864	,02349	

Table 23: Paired comparison of first two and last two messages for agreements

	Paired comparison for no agreements	Messages	Mean	N	Standard Deviation	Standard Error of Mean	Sig.
No Agreement	D1 (pleasure / displeasure)	First two messages	,0890	30	,29400	,05368	,004
		Last two messages	-,2040	30	,34719	,06339	
	D2 (solidarity / conflict)	First two messages	-,1267	30	,30958	,05652	,080
		Last two messages	-,2747	30	,32244	,05887	
	D3 (other- / self-oriented)	First two messages	,1053	30	,24866	,04540	,000
		Last two messages	-,2310	30	,33159	,06054	
	Utility Difference	First two messages	,9177	30	,29504	,05387	,000
		Last two messages	,4633	30	,25548	,04664	

Table 24: Paired comparison of first two and last two messages for no agreements

Overall we can confirm the results obtained in the last two chapters. For successful negotiations we observe an initial decrease of positive emotions as well as an increase of solidarity. Upon positive negotiation conclusion, we finally observe an increase of positive emotions again. For failed negotiations we also observe an initial decrease of positive emotions, however no increase of solidarity. Thus dimension 1 (pleasure vs. displeasure) initially develops similar for agreement and no agreement negotiations, dimension 2 (solidarity vs. conflict) and dimension 3 (other- vs. self-oriented behavior) however, do not.

C.6) Discussion of results

Our results indicate interesting conclusions regarding our analyzed negotiations with respect to whether an agreement was reached or not. Both, successful and failed negotiations start off very similar (the exchange of the first two messages). Upon entering the next negotiation phase (the exchange of the second two messages) clear distinctions between the two groups can be observed for all dimensions as well as for the utility difference. The following specific negotiation patterns for both groups can be observed:

For the *agreement group* (Diagram 9) a clear emotional pattern emerges throughout the negotiation process. At the beginning, the pleasure value is clearly positive. Subsequently this value becomes slightly negative, expressing

displeasure, and towards the end of the negotiation it again reaches similar values as at the beginning. Thus a distinct u-shaped pattern for D1 (pleasure vs. displeasure) can be observed throughout the negotiation. Values for D2 (solidarity vs. conflict) show a significant increase during all negotiation phases until a certain value is reached, and then is kept constant. Other- vs. self-oriented behavior (D3) does not show significant changes at any negotiation stage, but rather stays clearly positive during the whole negotiation.

The u-shaped pleasure vs. displeasure dimension, or the temporary decrease of positive emotions (to an almost neutral level with low intensity), indicates that the bargaining process at some point enters a phase of constructive and fact based discussion. This observation is further supported by the constant increase of solidarity, as well as the constantly high value of other-oriented behavior, even during the decrease of positive emotions. The fact that emotions at the end of a negotiation again become more positive and stronger, indicates that crucial questions under negotiation have been solved and/or that the negotiation has been concluded successfully. The overall positive development of the negotiation is reflected in and further supported by the significant and constant decrease of the utility difference. Especially at the beginning of the low emotion phase of rational discussion, the decrease of the utility difference is maximal. Hence the difference of utility seems to be a fairly good predictor for negotiation phases.

These results strongly support hypothesis H2b and H3b. Hypothesis H4b, postulating an increase in other-oriented behavior, however is not supported. A reason for this might be that, due to the initially emotional positive atmosphere and an initially high and steady increasing value of solidarity, other-oriented behavior already is at a maximum level from the beginning on. An explanation for this could be high and positive expectations of negotiators regarding the forthcoming negotiation process. The fallback of positive emotions (the decrease of pleasure) might be explained by and ascribed to the signaling function of emotions, as mentioned in prior chapters. By showing less positive emotions of pleasure, negotiators can signal the importance of an issue or the situation itself to their counterpart. For the positive negotiation development it is of utmost importance that this signal is understood and interpreted correctly by the signal receiver.

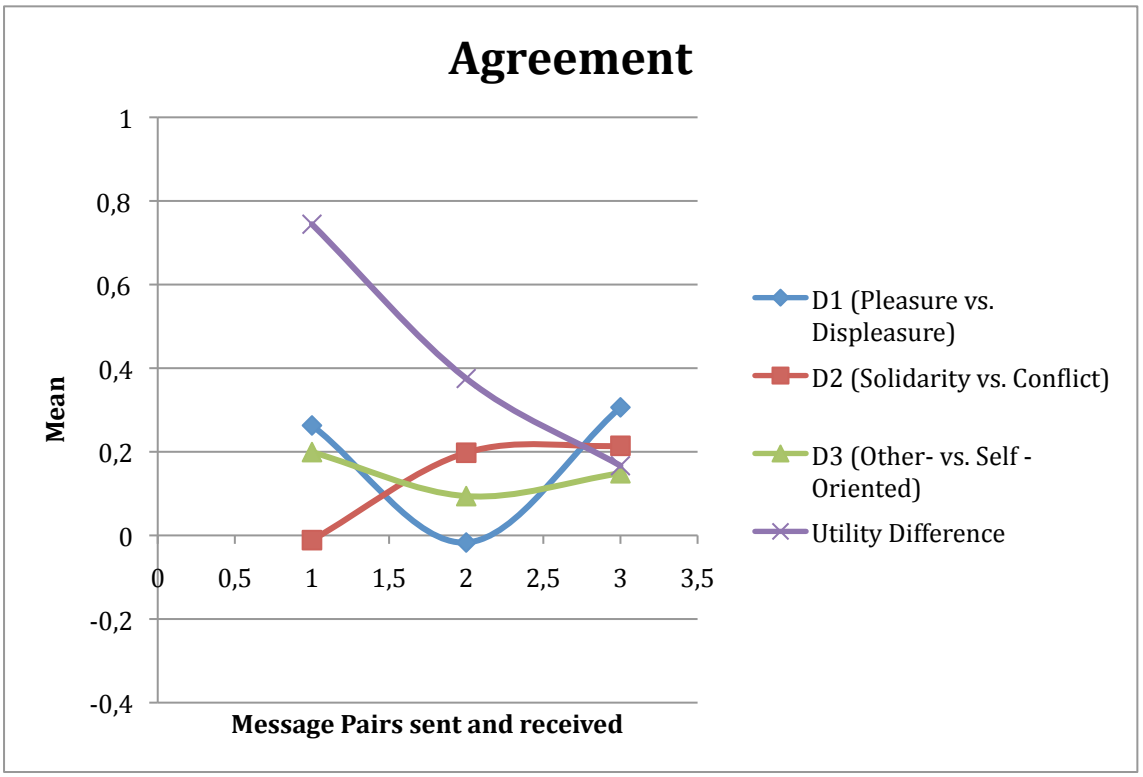

Diagram 9: Time line development of dimensions and utility difference for agreements

For the *no agreement group* (Diagram 10) a distinct but also expected pattern could be observed. Here we note a constant decrease in values for D1 (pleasure vs. displeasure) as well as for D3 (other- vs. self-oriented behavior) until a certain value is reached in both dimensions. The increase in displeasure and self-oriented behavior occurs in the same phase as a decrease in D1 was observed for the agreement group. The no agreement group however seems to be stuck in this phase of deteriorating values, with no chance of improvement. The solidarity vs. conflict dimension does not show significant change in any stage of the negotiation for the no agreement group. The difference in utilities steadily decreases in this group, however the absolute, step wise value of reduction stays constant throughout the negotiation phases, contrary to the agreement group. Also the ultimate utility difference is rather high and accordingly indicates that no agreement could be reached. Consequently the obtained results for utility differences support hypothesis H1.

Our obtained results for the no agreement group strongly support hypothesis H2c and H4c. Hypothesis H3c, postulating a steady increase in conflict, could however not be supported, as explained above.

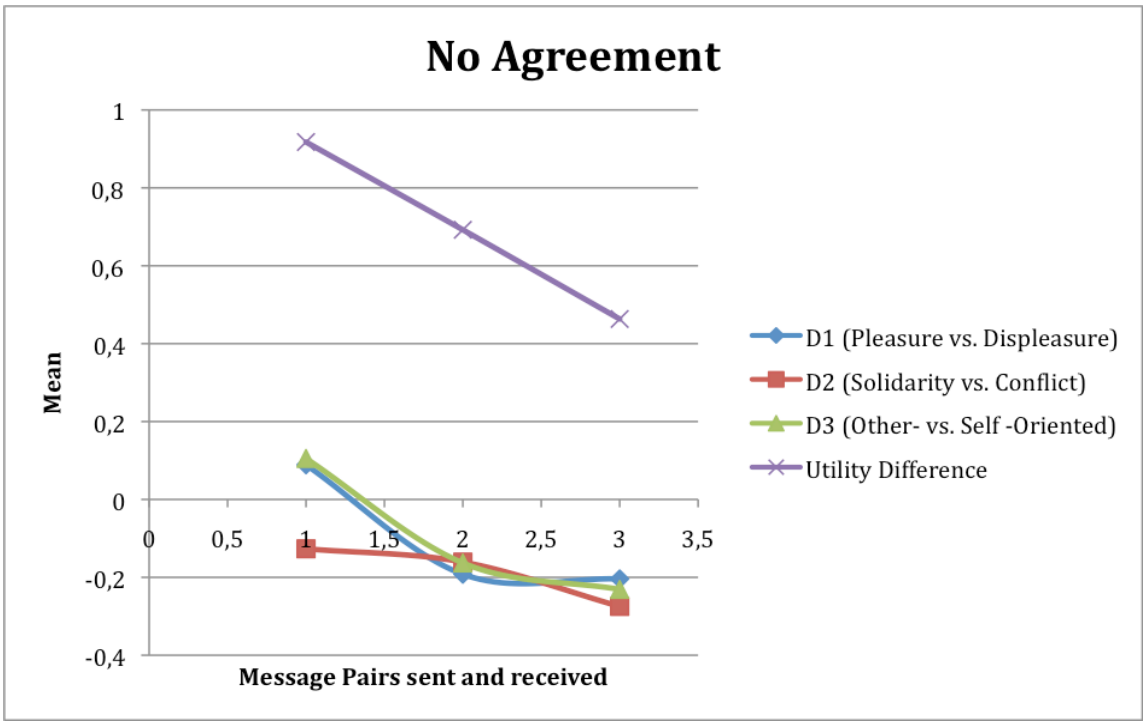

Diagram 10: Time line development of dimensions and utility difference for no agreements

Overall our research integrates with existing phase model theories (Gulliver 1979; Bednar and Curingon 1983; Holmes 1992), as we also observe different negotiation phases together with distributive as well as integrative negotiation stages. Phase model theories however do not incorporate the importance of emotions as much as new research would suggest.

One of the critical points for negotiation success is the communication process of emotional communication, and thus the emotional decoding as well as encoding process. As referred to earlier, the signaling function of emotions and consequently the appropriate use of emotional signals, predetermines the course of a negotiation. With respect to the negotiation phase (initiation, core, conclusion), the appropriate negotiation context (distributive vs. integrative) defines the negotiation process and finally the negotiation outcome.

C.7) Conclusion

The present research is a contribution to negotiation research and indicates the importance and consequences of emotions on and in online negotiations. Our obtained results integrate with phase model theory and support the definition of negotiations as a combination of distinct negotiation phases. We identified distinct emotional patterns for successful and failed negotiations.

Results show that each and every negotiation (successful and failed) starts very similar. All negotiations typically show a preliminary decrease of positive emotions. Successfully concluded negotiations, however, are also characterized by a simultaneous increase of solidarity. This increase of solidarity instances cannot be observed for failed negotiations, which strictly develop negatively and are characterized by negativity conserving behavior. Successful negotiations on the other hand, are ultimately characterized by a strong increase of positive emotions. Thus, for successful negotiations, we observe a u-shaped "emotional valley" over the timeline of a negotiation.

A possibility for initially distinguishing negotiation success from negotiation failure can be found at the beginning of a negotiation, in the transition from the negotiation initiation to the core phase. Interestingly expressions of pleasure or displeasure are not a good indicator for negotiation success or failure, but solidarity is. Expressions of pleasure or displeasure, however, precede and influence solidly behavior, since these emotional expressions possess a signaling function in online communication.

Appendix

		N	Mean	Standard Deviation	Standard Error of Mean	Sig.
D1 (first two messages)	Group 1	30	,1223	,30192	,05512	0,144
	Group 2	30	,2297	,25762	,04704	
D2 (first two messages)	Group 1	30	-,0557	,28099	,05130	0,731
	Group 2	30	-,0823	,31605	,05770	
D3 (first two messages)	Group 1	30	,1467	,24633	,04497	0,861
	Group 2	30	,1580	,25345	,04627	
Utility Difference (first two messages)	Group 1	30	,8303	,32972	,06020	0,985
	Group 2	30	,8317	,22565	,04120	
D1 (second two messages)	Group 1	30	-,1097	,26355	,04812	0,876
	Group 2	30	-,0993	,24878	,04542	
D2 (second two messages)	Group 1	30	-,0090	,30215	,05516	0,522
	Group 2	30	,0460	,35720	,06522	
D3 (second two messages)	Group 1	30	-,0007	,28967	,05289	0,423
	Group 2	30	-,0683	,35684	,06515	
Utility Difference (second two messages)	Group 1	30	,5547	,26865	,04905	0,562
	Group 2	30	,5130	,28434	,05191	
D1 (last two messages)	Group 1	30	,0960	,36863	,06730	0,384
	Group 2	30	,0063	,42114	,07689	
D2 (last two messages)	Group 1	30	-,0467	,40154	,07331	0,754
	Group 2	30	-,0137	,40899	,07467	
D3 (last two messages)	Group 1	30	-,0740	,34883	,06369	0,466
	Group 2	30	-,0083	,34458	,06291	
Utility Difference (last two messages)	Group 1	30	,3093	,26789	,04891	0,862
	Group 2	30	,3207	,23561	,04302	

Appendix A1: Comparison of Group 1 and Group 2 for relevant characteristics

References

Abbott, A. and J. Forrest (1986). "Optimal Matching Methods for Historical Sequences." Journal of Interdisciplinary History **16**(3): 471-494.

Adler, R. S., B. Rosen, et al. (1998). "Emotions in Negotiation: How to Manage Fear and Anger." Negotiation Journal **14**(2): 161–179.

Allred, K. G. (2000). "Distinguishing Best and Strategic Practices: A Framework for Managing the Dilemma Between Creating and Claiming Value." Negotiation Journal **16**(4): 387-397.

Allred, K. G., J. S. Mallozzi, et al. (1997). "The Influence of Anger and Compassion on Negotiation Performance." Organizational Behavior and Human Decision Processes **70**(3): 175-187.

Anderson, C. and L. L. Thompson (2004). "Affect From the Top Down: How Powerful Individuals' Positive Affect Shapes Negotiations." Organizational Behavior and Human Decision Processes **95**(2): 125-139.

Barry, B. and I. S. Fulmer (2005). "Methodological Challenges in the Study of Negotiator Affect." International Negotiation **9**(3): 485-502.

Barry, B. and R. L. Oliver (1996). "Affect in Dyadic Negotiation: A Model and Propositions." Organizational Behavior and Human Decision Processes **67**(2): 127-143.

Barsade, S. G. (2002). "The Ripple Effect: Emotional Contagion and Its Influence on Group Behavior." Administrative Science Quarterly **47**(4): 644-675.

Bavelas, J., A. Black, et al. (1986). ""I Show How You Feel": Motor Mimicry as a Communicative Act." Journal of Personality and Social Psychology **50**(2): 322-329.

Bazerman, M. H., J. R. Curhan, et al. (2000). "Negotiation." Annual Review of Psychology **51**: 279-314.

Bazerman, M. H. and M. A. Neale (1982). "Improving Negotiation Effectiveness Under Final Offer Arbitration: The Role of Selection and Training." Journal of Applied Psychology **67**(5): 543-548.

Bednar, D. A. and W. P. Curingon (1983). "Interaction Analysis: A Tool for Understanding Negotiations." Industrial and Labor Relations Review **36**(3): 389-401.

Berkowitz, L. (1989). "Frustration-Aggression Hypothesis: Examination and Reformulation." Psychological Bulletin **106**(1): 59-73.

Bijmolt, T. H. A. and M. Wedel (1999). "A Comparison of Multidimensional Scaling Methods for Perceptual Mapping." Journal of Marketing Research **36**(2): 277-285.

Boudourides, M. A. (1995). Social and Psychological Effects in Computer-Mediated Communication. 2nd Workshop/Conference "Neties 95". TEI of Piraeus, Greece.

Bower, G. H. (1991). Mood Congruity of Social Judgments. Emotion and Social Judgments. J. P. Forgas. Oxford, England, Pergamos Press**:** 31-53.

Brett, J. M., M. Olekalns, et al. (2007). "Sticks and Stones: Language, Face, and Online Dispute Resolutions." Academy of Management Journal **50**(1): 85-99.

Bush, L. E. I. (1973). "Individual Differences Multidimensional Scaling of Adjectives Denoting Feelings." Journal of Personality and Social Psychology **25**(1): 50-57.

Butt, A. N., J. N. Choi, et al. (2005). "The Effects of Self-Emotion, Counterpart Emotion, and Counterpart Behavior on Negotiator Behavior: A Comparison

of Individual-Level and Dyad-Level Dynamics." Journal of Organizational Behavior **26**(6): 681-704.
Carnevale, P. J. D. and A. M. Isen (1986). "The Influence of Positive Affect and Visual Access on the Discovery of Integrative Solutions in Bilateral Negotiation." Organizational Behavior and Human Decision Processes **37**(1): 1-13.
Carver, C. S. and M. F. Scheir (1990). "Origins and Functions of Positive and Negative Affect: A Control-Process View." Psychological Review **97**(1): 19-35.
Clark, M. S. (1992). Emotion and Social Behavior. Beverly Hills, CA, Sage.
Conlon, D. E. and C. S. Hunt (2002). "Dealing With Feeling: The Influence of Outcome Representations on Negotiation." International Journal of Conflict Management **13**(1): 38-58.
Cox, T. F. and M. A. A. Cox (2001). Multidimensional scaling. Boca Raton, Fla., Chapman & Hall, CRC.
Daft, R. and R. Lengel (1984). "Information Richness: A New Approach to Managerial Behavior and Organization Design." Research in Organizational Behavior **6**: 191-233.
Daft, R. and R. Lengel (1986). "Organizational Information Requireents, Media Richness and Structural Design." Management Science **32**(5): 554-571.
Delaney, M. M., A. Foroughi, et al. (1997). "An Empirical Study of the Efficacy of a Computerized Negotiation Support System (NSS)." Decision Support Systems **20**: 185-197.
Derks, D., A. E. R. Bos, et al. (2008). "Emoticons in Computer-Mediated Communication: Social Motives and Social Context." CyberPsychology and Behavior **11**(1): 99-101.
Derks, D., A. H. Fischer, et al. (2008). "The Role of Emotion in Computer-Mediated Communication: A Review." Computers in Human Behavior **24**: 766-785.
Deutsch, M. (1977). The Resolution of Conflict. New Haven, CT, Yale University Press.
Douglas, A. (1962). Industrial Peacemaking. New York, Columbia University Press.
Eibl-Eibesfeldt, I. (1989). Human Ethology. New York, Aldine de Gruyter Press.
Eisenberg, N., R. A. Fabes, et al. (1989). "Relation of Sympathy and Personal Distress to Prosocial Behavior: A Multimethod Study." Journal of Personality and Social Psychology **57**(1): 55-66.
Ekman, P. (1993). "Facial Expression and Emotion." American Psychologist **48**(4): 384-392.
Ekman, P. (1999). Basic Emotions. Handbook of Cognition and Emotion. T. Dalgleish and M. J. Power. Sussex, John Wiley.
Faley, T. and J. T. Tedeschi (1971). "Status and Reactions to Threats." Journal of Personality and Social Psychology **17**(2): 192-199.
Feldman Barrett, L. and P. M. Niedenthal (2004). "Valence Focus and the Perception of Facial Affect." Emotion **4**(3): 266-274.
Feldman Barrett, L. and J. A. Russell (1999). "The Structure of Current Affect: Controversies and Emerging Consensus." Current Directions in Psychological Science **8**(1): 10-14.
Fernandez-Dols, J. and M. Ruiz-Belda (1995). "Are Smiles a Sign of Happiness? Gold Medal Winners at the Olympic Games." Journal of Personality and Social Psychology **69**(6): 1113-1119.

Fiedler, K. (1991). On the Task, the Mesures and the Mood in Research on Affect amd Social Cognition. Emotion and Social Judgments. J. P. Forgas. Oxford, England, Pergamon Press**:** 83-104.

Fisher, R. and W. H. Davis (1987). "Six Basic Interpersonal Skills for a Negotiator's Repertoire." Negotiation Journal **3**(2): 117-122.

Forgas, J. P. (1995). "Mood and Judgment: The Affect Infusion Model (AIM)." Psychological Bulletin **117**(1): 39-66.

Forgas, J. P. (1998). "On Feeling Good and Getting Your Way: Mood Effects on Negotiator Cognition and Bargaining Strategies." Journal of Personality and Social Psychology **74**(3): 565-577.

Forgas, J. P. and G. H. Bower (1987). "Mood Effects on Person-Perception Judgments." Journal of Personality and Social Psychology **53**(1): 53-60.

Forgas, J. P., G. H. Bower, et al. (1990). "Praise or Blame? Affective Influences on Attributions for Achievement." Journal of Personality and Social Psychology **59**(4): 809-819.

Forgas, J. P. and K. Fiedler (1996). "Us and Them: Mood Effects on Intergroup Discrimination." Journal of Personality and Social Psychology **70**(1): 28-40.

Forgas, J. P. and J. M. George (2001). "Affective Influences on Judgments and Behavior in Organizations: An Information Processing Perspective." Organizational Behavior and Human Decision Processes **86**(1): 3-34.

Friedman, R., C. Anderson, et al. (2004). "The Positive and Negative Effects of Anger on Dispute Resolution: Evidence From Electronically Mediated Disputes." Journal of Applied Psychology **89**(2): 369-376.

Frijda, N. H. (1986). The Emotions. Cambridge, Cambridge University Press.

Gibbons, P., J. J. Bradac, et al. (1992). The Role of Language in Negotiations: Threats and Promises. Communication and Negotiation. L. L. Putnam and M. E. Roloff. Newbury Park, CA, Sage. **20:** 157-175.

Gill, A. J., R. M. French, et al. (2008). Identifying Emotional Characteristics from Short Blog Texts. Thirtieth Annual Cognitive Science Conference (CogSci 2008), Washington, D.C.

Glazer, C. (2001). Playing Nice with Others: The Communication of Emotion in an Online Classroom, Glazer, Courtney.

Goffman, E. (1982). Interaction Ritual: Essays on Face-to-Face Behavior. New York, Pantheon Books.

Griessmair, M. and S. T. Koeszegi (2008). Exploring the Cognitive-Emotional Fugue in Electronic Negotiations, School of Business, Economics, and Statistics, University of Vienna.

Gulliver, P. H. (1979). Disputes and Negotiations: A Cross-Cultural Perspective. New York, NY, Academic Press.

Hancock, J. T. (2004). "Verbal Irony Use in Face-To-Face and Computer-Mediated Conversations." Journal of Language and Social Psychology **23**: 447-463.

Hancock, J. T., C. Landrigan, et al. (2007). Expressing Emotion in Text-based Communication. Emotion and Empathy, San Jose, CA.

Hegtvedt, K. A. and C. Killian (1999). "Fairness and Emotions: Reactions to the Process and Outcomes of Negotiations." Social Forces **78**(1): 269-302.

Henry, W. A. and R. V. Stumpf (1975). "Time and Accuracy Measures for Alternative Multidimensional Scaling Data Collection Methods." Journal of Marketing Research **12**(2): 165-170.

Holmes, M. E. (1992). Phase Structures in Negotiation. Communication and Negotiation. L. L. Putnam and M. E. Roloff. Thousand Oaks, Sage Publications. **20:** 83-105.

Homans, G. C. (1974). Social Behavior: Its Elementary Forms. New York, Harcourt Brace Jovanovich.

InterNeg©. "Invite Negotiation Systems." Retrieved 17.08, 2009, from http://invite.concordia.ca.

Isen, A. M. (1985). "Asymmetry of Happiness and Sadness in Effects on Memory in Normal College Students: Comment on Hasher, Rose, Zacks, Sanft, and Doren." Journal of Experimental Psychology: General **114**(3): 388-391.

Isen, A. M. and K. A. Daubman (1984). "The Influence of Affect on Categorization." Journal of Personality and Social Psychology **47**(6): 1206-1217.

Isen, A. M., K. A. Daubman, et al. (1987). "Positive Affect Facilitates Creative Problem Solving." Journal of Personality and Social Psychology **52**(6): 1122-1131.

Izard, C. E. (1993). "Four Systems for Emotion Activation: Cognitive and Noncognitive Processes." Psychological Review **100**(1): 68-90.

Johnson, E. J. and A. Tversky (1983). "Affect, Generalization, and the Perception of Risk." Journal of Personality and Social Psychology **45**(1): 20-31.

Joinson, A. N. (2001). "Self-Disclosure in Computer-Mediated Communication: The Role of Self-Awareness and Visual Anonymity." European Journal of Social Psychology **31**(2): 177-192.

Kato, Y. and K. Akahori (2005). Effects of Emotional Transmissions between Senders and Receivers on Emotions Experienced in E-mail Communication. ED-Media. Montreal, Canada.

Kelly, J. R. and S. G. Barsade (2001). "Mood and Emotion in Small Groups and Work Teams." Organizational Behavior and Human Decision Processes **86**(1): 99-130.

Keltner, D. and B. N. Buswell (1997). "Embarrassment: Its Distinct Form and Appeasement Functions." Psychological Bulletin **122**(3): 250-270.

Keltner, D. and A. Kring (1998). "Emotion, Social Function, and Psychopathology." Review of General Psychology **2**(3): 320-342.

Keltner, D., K. D. Locke, et al. (1993). "The Influence of Attributions on the Relevance of Negative Emotions to Personal Satisfaction." Personality and Social Psychology Bulletin **19**(1): 21-29.

Kersten, G. E. (2004). E-Negotiation Systems: Interaction of People and Technologies to Resolve Conflicts. UNESCAP Third Annual Forum on Online Dispute Resolution. Melbourne, Australia.

Kersten, G. E. and G. Zhang (2003). Mining Inspire Data for the Determinants of Successful Internet Negotiations. Central European Journal of Operational Research.

Kiesler, S., J. Siegel, et al. (1984). "Social Psychological Aspects of Computer-Mediated Communications." American Psychologist **39**(10): 1123-1134.

Knutson, B. (1996). "Facial Expressions of Emotion Influence Interpersonal Trait Inferences." Journal of Nonverbal Behavior **20**: 165-182.

Kopelman, S., A. S. Rosette, et al. (2006). "The Three Faces of Eve: Strategic Displays of Positive, Negative, and Neutral Emotions in Negotiations." Organizational Behavior and Human Decision Processes **99**(1): 81-101.

Kramer, R. M., E. Newton, et al. (1993). "Self-Enhancement Biases and Negotiator Judgment: Effects of Self-Esteem and Mood." Organizational Behavior and Human Decision Processes **56**: 110-133.

Kramer, R. M., P. Pommerenke, et al. (1993). "The Social Context of Negotiation: Effects of Social Identity and Interpersonal Accountability on Negotiator Decision Making." Journal of Conflict Resolution **37**(4): 633-654.

Kraut, R. and R. Johnston (1979). "Social and Emotional Messages of Smiling: An Ethological Approach." Journal of Personality and Social Psychology **37**(9): 1539-1553.

Kraut, R. E. (1978). "Verbal and Nonverbal Cues in the Perception of Lying." Journal of Personality and Social Psychology **36**(4): 380-391.

Kring, A. M., L. F. Barrett, et al. (2003). "On the Broad Applicability of the Affective Circumplex: Representations of Affective Knowledge Among Schizophrenia Patients." Psychological Science **14**(3): 207-214.

Kruskal, J. B. (1964). "Multidimensional Scaling by Optimizing Goodness of Fit to a Nonmetric Hypothesis." Psychometrika **29**(1): 1-27.

Kumar, R. (1997). "The Role of Affect in Negotiations: An Integrative Overview." The Journal of Applied Behavioral Science **33**(1): 84-100.

Lanzetta, J. T. and B. G. Englis (1989). "Expectations of Cooperation and Competition and Their Effects on Observers' Vicarious Emotional Responses." Journal of Personality and Social Psychology **56**(4): 543-554.

Lawler, E. J. and J. Yoon (1993). "Power and the Emergence of Commitment Behavior in Negotiated Exchange." American Sociological Review **58**(4): 465-481.

Lazarus, R. S. (2001). Relational Meaning and Discrete Emotions. Appraisal Processes in Emotion. K. R. Scherer, A. Schorr and T. Johnstone. New York, Oxford University Press.

Lee, A. S. (1994). "Electronic Mail as a Medium for Rich Communication: An Empirical Investigation Using Hermeneutic Interpretation." MIS Quarterly **18**(2): 143-157.

Lerner, J. S. and D. Keltner (2000). "Beyond Valence: Toward a Model of Emotion-Specific Influences on Judgment and Choice." Cognition and Emotion **14**(4): 473-493.

Lerner, J. S. and D. Keltner (2001). "Fear, Anger, and Risk." Journal of Personality and Social Psychology **81**(1): 146-159.

Levenson, R. W. and J. M. Gottman (1983). "Marital Interaction: Physiological Linkage and Affective Exchange." Journal of Personality and Social Psychology **45**(3): 587-597.

Lewis, M. and J. Haviland-Jones (2004). Handbook of Emotions. New York, NY, Guilford Press.

Li, C., J. Giampapa, et al. (2006). "Bilateral Negotiation Decisions With Uncertain Dynamic Outside Options." IEEE Transactions on Systems, Man, and Cybernetics - Part C: Applications and Reviews **36**(1): 31-44.

Liu, Y. and D. Ginther (2001). Instructional Strategies for Achieving a Positive Impression in Computer-Mediated Communication (CMC) Distance Education Courses. Mid-South Instructional Technlogy Conference, Murfreesboro, TN.

Liu, Y., D. Ginther, et al. (2001). "How Do Frequency and Duration of Messaging Affect Impression Development in Computer-Mediated Communication?" Journal of Universal Computer Science **7**(10): 893-913.

Loewenstein, G. F., L. Thompson, et al. (1989). "Social Utility and Decision Making in Interpersonal Contexts." Journal of Personality and Social Psychology **57**(3): 426-441.

Loewenstein, G. F., E. U. Weber, et al. (2001). "Risk as Feelings." Psychological Bulletin **127**(2): 267-286.

Lupton, N. C., M. J. Hine, et al. (2006). Social Construction and Emotion and its Role in Virtual Work Arrangements. Grand Challenges in Business and Information Management Processes. M. G. Hunter and S. Burgess. Las Vegas, NV, The Information Institute**:** 76-100.

Mayer, J. D., Y. N. Gaschke, et al. (1992). "Mood-Congruent Judgment Is a General Effect." Journal of Personality and Social Psychology **63**(1): 119-132.

McCrae, R. R. and P. T. J. Costa (1991). "Adding Liebe und Arbeit: The Full Five-Factor Model and Well-Being." Personality and Social Psychology Bulletin **17**(2): 227-232.

McIntyre, S. H. and A. B. Ryans (1977). "Time and Accuracy Measures for Alternative Multidimensional Scaling Data Collection Methods: Some Additional Results." Journal of Marketing Research **14**(4): 607-610.

Miller, R. S. and M. R. Leary (1992). Social Sources and Interactive Functions of Emotion: The Case of Embarrassment. Emotion and Social Behavior. M. S. Clark. Beverly Hills, CA, Sage.

Mineka, S. and M. Cook (1993). "Mechanisms Involved in the Observational Conditioning of Fear." Journal of Experimental Psychology: General **122**(1): 23-38.

Moore, D. A., T. R. Kurtzberg, et al. (1999). "Long and Short Routes to Success in Electronically Mediated Negotiations: Group Affiliations and Good Vibrations." Organizational Behavior and Human Decision Processes **77**(1): 22-43.

Morris, M., J. Nadler, et al. (2002). "Schmooze or Lose: Social Friction and Lubrication in E-Mail Negotiations." Group Dynamics: Theory, Research, and Practice **6**(1): 89-100.

Morris, M. W. and D. Keltner (2000). "How Emotions Work: The Social Functions of Emotional Expression in Negotiations." Research in Organizational Behavior **22**: 1-50.

Murphy, S. A., N. C. Lupton, et al. (2007). Emotion and Judgement in Virtual Environments: A Research Framework. ASAC 2007. Ottawa, ON.

Nardi, B. A. and V. O'Day (2000). Information Ecologies: Using Technology With Heart. Cambridge, MIT Press.

Nastase, V. (2006). "Concession Curve Analysis for Inspire Negotiations." Group Decision and Negotiation **15**(2): 185-193.

Neale, M. A. and M. H. Bazerman (1991). "The Role of Perspective-Taking Ability in Negotiating under Different Forms of Arbitration." Industrial and Labor Relations Review **36**(3): 378-388.

Neufeld, R. W. J. (1975). "A Multidimensional Scaling Analysis of Schizophrenics' and Normals' Perceptions of Verbal Similarity." Journal of Abnormal Psychology **84**(5): 498-507.

Neufeld, R. W. J. (1976). "Simultaneous Processing of Multiple Stimulus Dimensions Among Paranoid and Nonparanoid Schizophrenics." Multivariate Behavioral Research **11**(4): 425-441.

Nunamaker, J. F., A. R. Dennis, et al. (1991). "Electronic Meeting Systems to Support Group Work." Communication of the ACM **34**(7): 40-61.

O'Connor, K. M. and J. A. Arnold (2001). "Distributive Spirals: Negotiation Impasses and the Moderating Role of Disputant Self-Efficacy." Organizational Behavior and Human Decision Processes **84**(1): 148-176.

O'Connor, K. M., C. K. W. De Dreu, et al. (2002). "What We Want to Do Versus What We Think We Should Do: An Empirical Investigation of Intrapersonal Conflict." Journal of Behavioral Decision Making **15**(5): 403-418.

Obeidi, A., K. W. Hipel, et al. (2005). "The Role of Emotions in Envisioning Outcomes in Conflict Analysis." Group Decision and Negotiation **14**(6): 481-500.

Olekalns, M., C. Robert, et al. (2005). "The Impact of Message Frame on Negotiators' Impressions, Emotions, and Behaviors." International Journal of Conflict Management **16**(4): 379-402.

Olekalns, M. and P. L. Smith (2003). "Testing the Relationships Among Negotiators' Motivational Orientations, Strategy Choices, and Outcomes." Journal of Experimental Social Psychology **39**(2): 101-117.

Oliver, R. L. (1993). "Cognitive, Affective, and Attribute Bases of the Satisfaction Response." Journal of Consumer Research **20**(3): 418-430.

Otondo, R. F., J. R. V. Scotter, et al. (2008). " The Complexity of Richness: Media, Message, and Communication Outcomes." Information and Management **45**(1): 21-30.

Parkinson, B. (1996). "Emotions are Social." British Journal of Psychology **87**: 663-683.

Pesendorfer, E.-M. and S. T. Koeszegi (2005). The Effect of Communication Mode in E-Negotiations, School of Business, Economics, and Computer Science University of Vienna.

Pesendorfer, E.-M. and S. T. Koeszegi (2006). "Hot Versus Cool Behavioral Styles in Electronic Negotiations: The Impact of Communicative Mode." Group Decision and Negotiation **15**: 141-155.

Pesendorfer, E.-M. and S. T. Koeszegi (2007). "Social Embeddedness in Electronic Negotiations." Group Decision and Negotiation **16**: 399-415.

Pillutla, M. and J. K. Murnighan (1996). "Unfairness, Anger and Spite: Emotional Rejections of Ultimatum Offers." Organizational Behavior and Human Decision Processes **63**(3): 208-224.

Pinkley, R. L., M. J. Gelfand, et al. (2005). "When, Where and How: The Use of Mutidimensional Scaling Methods in the Study of Negotiation and Social Conflict." International Negotiation **10**(1): 79-96.

Pruitt, D. G. and J. Z. Rubin (1986). Social Conflict: Escalation, Stalemate and Settlement. New York, Random House.

Rafaeli, A. and R. I. Sutton (1991). "Emotional Contrast Strategies as Means of Social Influence: Lessons from Criminal Interrogators and Bill Collectors." Academy of Management Journal **34**(4): 749-775.

Reisenzein, R. (1994). "Pleasure-Arousal Theory and the Intensity of Emotions." Journal of Personality and Social Psychology **67**(3): 525-539.

Rhoades, J. A., J. Arnold, et al. (2001). "The Role of Affective Traits and Affective States in Disputants' Motivation and Behavior During Episodes of Organizational Conflict." Journal of Organizational Behavior **22**(3): 329-345.

Rivera, K., N. J. Cooke, et al. (1996). The Effects of Emotional Icons on Remote Communication. Conference on Human Factors in Computing Systems, Vancouver, Canada.

Rogan, R. G. and M. R. Hammer (1995). "Assessing Message Affect in Crisis Negotiations An Exploratory Study." Human Communication Research **21**(4): 553-574.
Roseman, I. J., M. S. Spindel, et al. (1990). "Appraisals of Emotion-Eliciting Events: Testing a Theory of Discrete Emotions." Journal of Personality and Social Psychology **59**(5): 899-915.
Ross, W. H., D. Fischer, et al. (1997). "University Residence Hall Assistants as Mediators: An Investigation of the Effects of Disputant and Mediator Relationships on Intervention Preferences." Journal of Applied Psychology **27**(8): 664-707.
Rothbart, M. and W. Hallmark (1988). "In-Group–Out-Group Differences in the Perceived Efficacy of Coercion and Conciliation in Resolving Social Conflict." Journal of Personality and Social Psychology **55**(2): 248-257.
Russell, J. A. (1978). "Evidence of Convergent Validity on the Dimensions of Affect." Journal of Personality and Social Psychology **36**(10): 1152-1168.
Russell, J. A. (1980). "A Circumplex Model of Affect." Journal of Personality and Social Psychology **39**(6): 1161-1178.
Russell, J. A. and M. Bullock (1985). "Multidimensional Scaling of Emotional Facial Expressions: Similarity From Preschoolers to Adults." Journal of Personality and Social Psychology **48**(5): 1290-1298.
Russell, J. A. and A. Mehrabian (1977). "Evidence for a Three-Factor Theory of Emotions." Journal of Research in Personality **11**(3): 273-294.
Rust, R. T. and B. Cooil (1994). "Reliability Measures for Qualitative Data: Theory and Implications." Journal of Marketing Research **31**(1): 1-14.
Scherer, K. R. (1986). "Vocal Affect Expression: A Review and a Model for Future Research." Psychological Bulletin **99**(2): 143-165.
Scherer, K. R., A. Schorr, et al. (2001). Appraisal Processes in Emotion. New York, Oxford University Press.
Schroth, H. A., J. Bain-Chekal, et al. (2005). "Sticks and Stones May Break Bones and Words Can Hurt Me: Words and Phrases That Trigger Emotions in Negotiations and Their Effects." International Journal of Conflict Management **16**(2): 102-127.
Schulz von Thun, F. (1981). Miteinander Reden: Störungen und Klärungen. Reinbeck bei Hamburg, Rowohlt.
Schwarz, N. N. and G. L. Clore (1993). The Use of Mood as Information. The Nature of Emotion: Fundamental Questions. P. Ekman and R. J. Davidson. New York, Oxford Press.
Sedikides, C. (1995). "Central and Peripheral Self-Conceptions Are Differentially Influenced by Mood: Tests of the Differential Sensitivity Hypothesis." Journal of Personality and Social Psychology **69**(4): 759-777.
Shapiro, D. L. (2002). "Colloquy: Appreciating Emotion in Conflict Processes." Conflict Resolution Quarterly **20**(1): 67-82.
Shapiro, D. L. (2006). "Teaching Students How to Use Emotions as They Negotiate." Negotiation Journal **22**(1): 105-109.
Short, J., E. Williams, et al. (1976). The Social Psychology of Telecommunications. London, Wiley.
Sinaceur, M. and L. Z. Tiedens (2006). "Get Mad and Get More Than Even: When and Why Anger Expression is Effective in Negotiations." Journal of Experimental Social Psychology **42**(3): 314-322.

Smith, C. A. and P. C. Ellsworth (1985). "Patterns of Cognitive Appraisal in Emotion." Journal of Personality and Social Psychology **48**(4): 813-838.
Sokolova, M., M. Shah, et al. (2006). "Comparative Analysis of Text Data in Successful Face-to-Face and Electronic Negotiations." Group Decision and Negotiation **15**(2): 127-140.
Sokolova, M. and S. Szpakowicz (2007). "Strategies and Language Trends in Learning Success and Failure of Negotiation." Group Decision and Negotiation **16**: 469-484.
Solomon, R. C. (1989). "The Emotion of Justice." Social Justice Research **3**(4): 345-374.
Sproull, L. and S. Kiesler (1986). "Reducing Social Context Cues: Electronic Mail in Organizational Communication." Management Science **32**(11): 1492-1512.
Srnka, K. J. (2007). "Integration Qualitativer und Quantitativer Forschungsmethoden
Der Einsatz Kombinierter Forschungsdesigns als Möglichkeit zur Förderung der Theorieentwicklung in der Marketingforschung als Betriebswirtschaftliche Disziplin." Zeitschrift für Forschung und Praxis **29**(4): 247-260.
Srnka, K. J. and S. T. Koeszegi (2007). "From Words to Numbers: How to Transform Qualitative Data Into Meaningful Quantitative Results." Schmalenbach Business Review **59**(1): 30-58.
Stroebel, M. (2000). Effects of Electronic Markets on Negotiation Processes. ECIS, Vienna, Austria.
Stuhlmacher, A. F., M. Citera, et al. (2007). "Gender Differences in Virtual Negotiation: Theory and Research." Sex Roles **57**: 329-339.
Sutton, R. I. and A. Rafaeli (1988). "Untangling The Relationship Between Displayed Emotions And." Academy of Management Journal **31**(3): 461-487.
Thompson, L. (1990). "Negotiation Behavior and Outcomes: Empirical Evidence and Theoretical Issues." Psychological Bulletin **108**(3): 515-532.
Thompson, L. and P. H. Kim (2000). "How the Quality of Third Parties' Settlement Solutions Is Affected by the Relationship Between Negotiators." Journal of Experimental Psychology: Applied **6**(1): 3-14.
Thompson, L. and J. Nadler (2002). "Negotiating Via Information Technology: Theory and Application." Journal of Social Issues **58**(1): 109-124.
Tiedens, L. Z. (2001). "Anger and Advancement Versus Sadness and Subjugation: The Effect of Negative Emotion Expressions on Social Status Conferral." Journal of Personality and Social Psychology **80**(1): 86-94.
Trevino, L. K., R. Lengel, et al. (1987). "Media Symbolism, Media Richness, and Media Choice in Organizations." Communication Research **14**(5): 553-574.
Tronick, E. Z. (1989). "Emotions and Emotional Communication in Infants." American Psychologist **44**(2): 112-119.
Tu, C.-H. (2002). "The Impacts of Text-based CMC on Online Social Presence." Journal of Interactive Online Learning **1**(2): 1-24.
Van Kleef, G. A., C. K. W. De Dreu, et al. (2004a). "The Interpersonal Effects of Anger and Happiness in Negotiations." Journal of Personality and Social Psychology **86**(1): 57-76.
Van Kleef, G. A., C. K. W. De Dreu, et al. (2004b). "The Interpersonal Effects of Emotions in Negotiations: A Motivated Information Processing Approach." Journal of Personality and Social Psychology **87**(4): 510-528.
Varki, S., B. Cooil, et al. (2000). "Modeling Fuzzy Data in Qualitative Marketing Research." Journal of Marketing Research **37**(4): 480-489.

Walther, J. B. (1994). "Anticipated Ongoing Interaction Versus Channel Effects on Relational Communication in Computer-Mediated Interaction." Human Communication Research **20**(4): 473-501.

Walther, J. B. (1995). "Relational Aspects of Computer-mediated Communication: Experimental Observations Over Time." Organization Science **6**(2): 186-203.

Walton, R. E. and R. B. McKersie (1965). A Behavioral Theory of Labor Negotiations: An Analysis of a Social Interaction System. New York, NY, McGraw-Hill.

Watzlawick, P., J. H. Beavin, et al. (1967). Pragmatics of Human Communication: A Study of Interactional Patterns, Pathologies, and Paradoxes. New York, Norton.

White, G. (2000). Representing Emotional Meaning: Category, Metaphor, Schema, Discourse. Handbook of Emotions. New York, Guilford Press**:** 30-44.

Wiggins, J. S. (1979). "A Psychological Taxonomy of Trait-Descriptive Terms: The Interpersonal Domain." Journal of Personality and Social Psychology **37**(3): 395-412.

Wilkenfeld, J., S. Kraus, et al. (1995). "GENIE: A Decision Support System for Crisis Negotiations." Decision Support Systems **14**: 369-391.

Zack, M. H. and J. L. McKenny (1995). "Social Context and Interaction in Ongoing Computer-Supported Management Groups." Organization Science **6**(4): 394-422.

Zartman, I. W. (1982). The Practical Negotiator. New Haven, Yale University Press.

Zhou, L. and D. Zhang (2007). "Typing or Messaging? Modality Effect on Deception Detection in Computer-Mediated communication." Decision Support Systems **44**(1): 188-201.

Anhang

Enthält:

- 1) Deutsche Zusammenfassung der Diplomarbeit (Abstract)
- 2) Deutscher Lebenslauf (Curriculum Vitae)

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1) Zusammenfassung auf deutsch (Abstract)

Elektronische Verhandlungen erlangen durch die fortschreitende Digitalisierung immer mehr an Bedeutung. Ein positiver Verhandlungsverlauf und ein daraus resultierender Verhandlungserfolg aber, kann durch eine entsprechende Behandlung und Betrachtung von Emotionen beeinflusst und gesteuert werden, da diese einen determinierenden Einflussfaktor in Bezug auf menschliches, soziales Verhalten darstellen (Thompson 1990; Miller and Leary 1992; Izard 1993; Parkinson 1996; Keltner and Buswell 1997; Forgas and George 2001; Kelly and Barsade 2001). Forschung in diesem Gebiet aber, betrachtet Emotionen hauptsächlich as statische Antezendenz- oder Ergebnis-variable, und vernachlässigt den dynamischen Charakter sowie den kontinuierlichen Einfluss von Emotionen auf den gesamten Verhandlungsprozess (Homans 1974; Carnevale and Isen 1986; Frijda 1986; Sutton and Rafaeli 1988; Berkowitz 1989; Kumar 1997). Um den neuen kontextuellen Herausforderungen von elektronischen Verhandlungen zu begegnen, ist es unerlässlich, ein detaillierteres Bild dieses komplexen Verhandlungsprozesses zu erarbeiten. Dies kann bewerkstelligt werden indem man einzelne, spezifische Verhandlungsphasen identifiziert, die zusammen eine komplette Verhandlung definieren. Mit Hilfe von „Phase Model Theory“ (Douglas 1962; Gulliver 1979; Holmes 1992) sind wir in der Lage Verhandlungsphasen mit spezifischem emotionalen Verhalten in Verbindung zu bringen. Weiters helfen uns die Utility Funktionen der einzelnen Verhandlungspartner, die erhaltenen Erkenntnisse über den prozessualen Verlauf von Verhandlungen zu konkretisieren. In der vorliegenden Arbeit wurden mittels Multi-Dimensionaler Skalierung drei Dimensionen (pleasure vs. displeasure, solidarity vs. conflict, and other- vs. self-oriented behavior) identifiziert, welche es uns ermöglichen, eindeutig ausgeprägte Verhandlungsprozesse zu identifizieren. Dadurch sind wir in der Lage, Verhandlungserfolg von Verhandlungsmisserfolg, anhand von spezifischen Kombinationen emotionaler Charakteristika, zu unterscheiden. Gescheiterte sowie erfolgreiche Verhandlungen sind beiderseits durch einen anfänglichen Abfall positiver Emotionen definiert. Für erfolgreiche Verhandlungen, lässt sich jedoch ein anfänglicher, simultaner Anstieg solidarischen Verhaltens feststellen, im Gegensatz zu gescheiterten Verhandlungen. Die finale Phase erfolgreicher Verhandlungen, ist letztlich wieder

durch einen Anstieg positiver Emotionen definiert. Wir haben diesen emotionalen Verlauf, der erfolgreiche von gescheiterten Verhandlungen eindeutig differenziert, als „emotionales Tal“ (emotional valley) bezeichnet.

2) CURRICULUM VITAE (Wissenschaftlicher Lebenslauf)

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Ausbildung

Seit 03/2002	Seit 03/2002 Studium der *Politikwissenschaft,* an der Universität Wien
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07/2000	Allgemeine Hochschulreife: Gymnasium BG/BRG Khevenhüllerschule in Linz

Auslandserfahrung

09/2007 – 07/2008	Studienaufenthalt an der Universitat Autònoma de Barcelona, in Barcelona (Spanien)
09/2004 – 08/2005	Studienaufenthalt im Rahmen des ERASMUS Programms an der Univ. Jean Moulin Lyon 3, in Lyon (Frankreich)

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Projektarbeiten

2007	Accenture Campus Challenge: Zweiter Platz bei der Vertretung der Fakultät für Wirtschaftswissenschaften mit der Ausarbeitung und Präsentation des Fallstudien Projektes „BWZ am Zug“
2006	Deloitte Case Study Competition: Erster Platz bei der Ausarbeitung und Präsentation eines Change Management Prozesses

Fremdsprachen Kenntnisse

Fremdsprachen	Englisch:	Fließend in Wort und Schrift
	Französisch:	Fließend in Wort und Schrift
	Spanisch:	Sehr gut in Wort und Schrift