

Restoring intuition to the negotiation table?
Cognitive processes in negotiation decision-making
An investigation of negotiators in the EU
institutions.

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Abstract

What are the cognitive processes used by negotiators in uncertain and complex environments? What are the task environments which may induce negotiators' cognition towards intuition and quasirationality? These are the questions raised in this thesis.

The dominant negotiation research literature, on the basis of insights from Bounded Rationality theory and the school of cognitive illusions, replies to it by normatively prescribing the use of analysis and by advising against the use of intuition and quasirationality. In the same time, there is a dearth of literature and empirical data about this topic with professional negotiators in real negotiation tasks.

Facing such a situation, this thesis reviews the available literature and highlight gaps in our current understanding of the cognitive processes of negotiators in uncertain and complex task environments, and of intuition in particular. The thesis then builds on this discussion to develop the analytical framework based on Social Judgment Theory's insights. This framework in turn guided the subsequent qualitative investigation, through the use of the explication interviewing technique, of the cognitive processes of professional negotiators in the EU institutions, particularly in complex and uncertain task environments.

Through this empirically grounded and theoretically informed approach, this thesis highlights the widespread use of non analytical cognitive modes (intuition and quasirationality) in some key negotiation tasks, the importance of trust in such a case to ensure a match between the cognitive mode used and that induced by the task, and, conversely, the impact of political expediency in the choice by negotiators of a cognitive mode different from that induced by the task. Last, it highlights the possible cognitive conflicts resulting from the use of different cognitive modes by agents and principals.

This thesis suggests that the mainstream negotiation literature fails to give enough importance to the cognitive impact of tasks and to the use of non analytical cognitive modes in negotiation tasks. In particular, it does not factor in that, in certain tasks, negotiators may not have any other cognitive choice, but also for good cognitive reasons, than using intuition and quasirationality. As a consequence, the thesis makes an argument in favour of a more systematic attention to the cognitive impact of tasks in negotiation, and concludes that further research on this topic is essential to arrive at a better understanding of how tasks influence

negotiator's cognition , how and to what extent a cognitive match between the cognition used and that induced by the task can impact the outcome of a negotiation.

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και χαριν εχω τω ενδυναμωσαντι με χριστω ιησου τω κυριω ημων

"For intuition, it's no superstition"

(Jamiroquai, "Soul education", Synkronized, 1999)

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Chapter 1 Introduction

1.1. Background and context of this research.

This thesis is an exploration of the cognitive processes at work when negotiators have to make a decision, especially in complex and uncertain tasks. In particular, it seeks to explore the use of non analytical cognitive processes, commonly described as "intuitive", by professional negotiators.

The argument of this thesis is that the most influential paradigms in negotiation research (bounded rationality and cognitive illusions) have, too rapidly, not only discarded intuition as a cognitive flaw in negotiations, but also prescribed the analytical mode as the rule. Moreover, such an assumption has led negotiation scholarship to eschew research on this issue.

Based on a Social Judgment Theory perspective (Hammond & Grassia, 1985 ; Hammond, 1996; Hammond, 2000; Hammond, 2007), which postulates that cognitive processes are induced by the task, that the efficacy of such cognitive processes depends on their match with the mode induced by the task (Hammond, et al., 1983; Hammond, et al., 1997), and that cognition is adaptive (Brunswik, 1943; Hammond, 1980, p. 17; Hammond, 2010, p. 37), this research argues that it is essential to understand better the cognitive impact of negotiation tasks, and the cognitive responses given by negotiators. More specifically, based on the SJT, this research aims at unpacking negotiation tasks which induce non analytical cognitive processes. Exploring these elements with professional negotiators and with actually experienced negotiation tasks, this research will argue, in stark contrast to conventional wisdom in negotiation research, it will suggest that the negotiators' cognitive response matched the cognitive mode induced by the task, and that, if cognition is indeed adaptive, that use of the cognitive mode by negotiators has more robust psychological foundations and efficacy than what the dominant paradigms assume.

This thesis will therefore focus on negotiation, in the specific context of the European Union institutions, and through the particular angles of both negotiation decision-making, and the cognitive processes at work. These elements will be reviewed in turn below.

Negotiation is a human activity which is present in all aspects of life, from negotiating the price of one's future house, to negotiating a pay rise to negotiating an international treaty or a peace settlement in a conflict area in the world. Fisher and Ury would define it simply "as a fact of life" (Fisher & Ury, 1981, p. xi) .

The European Union ("The EU"), which forms the background of this research, is a place where negotiation and negotiating are of paramount importance. More specifically, the environment of the EU, where, as it will be shown below, negotiations are permanent, built-in in the institutional system, and where the issues dealt with by negotiators brought about an important and possibly unique level of complexity and uncertainty, was therefore deemed to be an adequate field of investigation for this research on the cognitive processes in negotiation decision-making.

The EU started in the early 1950s as a six-member international organisation dealing with coal and steel to grow to a 28 Member States strong international public body, the European Union ("The EU"). According to the Treaties, "the Union's aim is to promote peace, its values and the well-being of its peoples" (Article 3 of the Consolidated Treaties). To carry out its mission, the EU is made up of institutions, the principal of which being the European Parliament, the Council of the European Union, the European Council, the European Commission and the Court of Justice of the EU. These institutions are served by about 50,000 officials, in a variety of functions, including policy work and negotiations. Dür et al., who focussed on the relationship between negotiation and the EU, noted that "negotiations are ubiquitous in the European Union (EU) and essential to its functioning. Virtually every activity involves or was set in motion through a process of negotiation" (Dür, et al., 2011, p. 1). Moreover, negotiations take place either formally or informally between and among a great variety of actors, from the Union's official bodies to national parliaments, interests groups and foreign states (Dür, et al., 2011, p.1). In addition, negotiation have been from the outset a core element of its way of functioning. Indeed, the unification of Europe, from its birth to its later developments, were, in stark contrast to earlier attempts by conquests or annexations (from the Roman Empire to Napoléon to Hitler), the outcome of intense negotiations between its Member States. Finally, negotiation has become an "ethos" in the EU both for the latter's internal working and for its external relations. As far as the latter is concerned, the EU is what Harvard professor Joseph Nye called a "Soft Power" (Nye, 2005): it does not hold any military forces on its own and has therefore to rely on its power of

influence (including its important economic means) in achieving its external policy goals. As far as the former is concerned, the institutional setting makes it impossible for a single actor to decide on its own: negotiations between the European Commission, the European Parliament and the Council of Ministers are essential and permanent, be it formally (in so-called "Trilogues") or informally. If negotiations are permanent between EU institutions, they are also permanent within EU institutions: in the European Parliament, political factions negotiate political support and amendments between each others; in the Council of Ministers, the 28 national delegates negotiate the adaption of a piece of legislation almost daily; in the European Commission (EC), all new policy initiatives are negotiated between EC Commissioners and between their departments. On that basis, Dür et al. characterised EU negotiations as "multilateral, multi-issue, recurrent, sometimes informal, subject to a distant shadow of the future, and complicated by the fact that some of the institutions within which they occur are also negotiators in their own right" (Dür, et al., 2011). Out of these features, several, such as multilateral, multi-issue and multi-level, point to the high level of complexity and uncertainty which typifies negotiations in the EU context, and in which EU negotiators operate.

As alluded above, in such a context, negotiation in the EU is more than "a process of communication by which two or more persons seek to advance their individual interests through joint actions" (Salacuse, 2003, p. 7), it can also be understood as a (joint) decision-making process. Moreover, at the individual level, negotiators themselves must constantly make decisions. Indeed, negotiators are, in addition to being communicators and to being experts of the substance of the negotiation decision-makers, and this is such an individual decision-making perspective which will be taken here. Further, such decisions must often be made at certain critical junctures: from the decision to start a negotiation, to that of engaging the other party, to the decision on concessions to the conclusion phase (Audebert, 2005, p. 161). Several authors noted that suggested that negotiating is about managing a "range of dilemmas" (Mastenbroeck, 1980, pp. 16 & 27; Dupont, 1994; Steele & Beasor, 1999; Lempereur & Colson, 2010). Mnookin et al. defined the latter as "a choice that is irreversible and has important consequences" (Mnookin & Susskind, 1999, p. 35). Dilemmas are well known in the negotiation literature. For instance, negotiation research pioneers Walton and McKersie characterized the dilemma between a competitive and a cooperative approach as a "central challenge" (Walton & McKersie, 1992, p. 280). Lax and Sebenius called such a key

tension the “negotiator’s dilemma” (Lax & Sebenius, 1986). The latter originates in game theory's "prisoners' dilemma", where "the best outcome for one person is not necessarily the best for both, but if both pursue their best option, they will often both get the worst outcome" (Sprangler, 2003).

In resolving such dilemmas, negotiators have to exercise their judgment. The latter is characterised by Hammond and others as "the cognitive process of last resort"; more than that, Hammond and other Social Judgment Theorists; judgment is equated with the use of intuition (Hammond, et al., 1975, p. 272; Brehmer, 1984, p.1; Hammond, 1996, p. 290). Indeed, intuition is a cognitive mode which is well known by negotiators, including diplomats (Bacchus, 1977; Thuysbaert, 2006), particularly by seasoned ones (Thompson, 2009). Graphic terms such as "using one's guts" or "hunches" is a colloquial and conventional way of representing the use of such a cognitive mode.

However, research on cognitive processes in negotiation is dominated by perspectives where rationality is understood strictly as the application of analysis, and where intuition is considered a cognitive flaw. Indeed, most theories in negotiation decision-making focus on Simon's bounded rationality (Simon, 1991, Lempereur, 2006, p. 166; Dupont, 2006, pp. 142-143), which points to the limits of rationality in negotiation and as a consequence considers all that is not analytical as faulty. This perspective is further reinforced by Kahneman and Tversky's perspective, which is the most highly regarded descriptive theory of negotiation (Thompson, 2006, p. 3). Under such a perspective, so-called "intuitive negotiations" (sometimes confused with "instinctive" negotiation) are unreliable and/or dangerous (Lempereur, 2003; Bazerman, et al., 2007; Malhotra, et al., 2008). At best, it gives sub-optimal outcomes (Tsay, et al., 2009) or is a peculiar feature (in all senses of the word) of non Western cultures (Osman-Gani, et al., 2002). Indeed, conventional wisdom and research on negotiation prescribe that negotiators should focus on "rational", deliberative, logico-deductive aspects, and should shy away from using their intuition. This is evidenced not only by the titles of books and articles of leading negotiation researchers (such as Bazerman and Neale's “negotiating rationally” (Bazerman, et al., 1993) or Max H. Bazerman and Malhotra's “When *Not* to Trust Your Gut” (Bazerman, et al., 2007)) or the paradigmatic orientations of most pieces of negotiation research (e.g., chapter 6 “Negotiating rationally in an irrational world” of Malhotra and Bazerman (Malhotra, et al., 2008)). However, in limiting itself to a rationalist approach, negotiation research did a disservice to negotiators by negating their

natural experience. Moreover, and more importantly for this piece of research, it dispensed itself in a rather doctrinaire way, to account for such an experience empirically. Indeed, as the next chapter demonstrates, beyond anecdotal evidence or a priori assumptions by negotiation scholars based on research in other fields, there appears to be a dearth of empirical research about the use of intuition by negotiators in actual negotiation tasks.

Such a situation is in stark contrast to what is happening in management (for instance (Barnard, 1971 [1938]; Agor, 1986), the military (for instance, Duggan, 2005), or in medical decision-making (for instance, McCutcheon & Pincombe, 2001; Quirk, 2006) where the use of intuition is permitted or even encouraged.

Since negotiators keep on using their intuition, which they often link to their experience, one can wonder about the causes of such a situation. Are negotiators mere victims of cognitive biases, as suggested by the dominant paradigms? Is it another case of, as negotiation scholar Avruch put it, “the real world’s bloody-minded obstinacy in simply not conforming to [negotiation] theory” (Avruch, 2006, p. 569). Or is it due to the fact that negotiation theory, and the paradigms upon which it rests do not adequately explain and inform the experience of negotiators? This is the latter question and perspective which will be taken here. In so doing, this research will try to bring an answer to the dissatisfaction put forward by leading negotiation scholar Bruce Patton whereby there is a “lack of tested prescriptive and substantive theory in a realistic setting” in negotiation training (Patton in Wheeler, 2000:7 & 13).

1.2. Research problems and research questions

This study therefore tries to fill that gap by investigating cognitive processes as they are used by negotiators in real situations. More specifically, this study investigates the impact of task environments on the cognitive processes of negotiators, employing real negotiation cases. It argues, drawing from a Social Judgment Theory perspective (Hammond & Grassia, 1985 ; Hammond, 1996; Hammond, 2000; Hammond, 2007), that specific cognitive processes employed by negotiators are induced by specific task environments, and that many critical negotiation tasks induce non-analytical cognitive processes, and that the latter are indeed actually employed by negotiators. Moreover, based on experiments by Hammond and others, which points to the adaptive value of the use of cognitive modes, it suggests, unlike conventional wisdom in negotiation research, that the use of the intuitive mode in negotiation

may be more effective in intuition-inducing environments, which would explain why negotiators continue to use such a mode in spite of all warnings.

As a consequence, this research aims at exploring the different cognitive processes used by negotiators as they experienced them in real negotiations, and particularly those in a context of complexity and uncertainty.

The research questions probed through the research are:

1° What are the cognitive processes experienced by negotiators, particularly under uncertainty?

2° What are the negotiation tasks inducing non analytical cognitive processes?

1.3. Justification for this research

This study aims to contribute to the understanding of the use of non-analytical cognitive modes in negotiation (intuition and quasirationality). Indeed, as the next chapter demonstrates, there appears to be a dearth of empirical research about the use of such a cognitive mode by negotiators in actual negotiation tasks. Indeed, most if not all of the current understanding of such a construct in negotiation research is either anecdotal or based on research on non negotiation-related tasks and on subjects who are not professional negotiators.

To our knowledge, it is therefore the first qualitative enquiry on the cognitive processes used by professional negotiators on actually experienced negotiation tasks in particular where cognition was disrupted by ambiguity or uncertainty, through the use of explication interviewing, and using the Social Judgment Theory framework as the analytical framework,

1.4. Analytical framework.

This piece will draw heavily from the Social Judgment Theory (SJT). Based on the insights of Egon Brunswik and Kenneth Hammond, SJT is defined as "a cognitive theory of the mental process by which individuals collect and evaluate information in order to reach a judgment. [...] When information is certain and when there is a known formula for organizing and applying it, judgment becomes analytical thought, and the cognitive process is relatively apparent. [...] However, as the nature of the problem becomes more complex-as

the number of factors to be considered grows, as information becomes less certain and doubt about the outcome of the judgment increases, and when the individual has no formula or rules for reaching the judgment-the judgment process becomes increasingly obscure, difficult for the individual to describe, and very difficult for others to infer. At the extreme end of this process, judgments are intuitive; that is, based on a vague sense of "experience" and not on a conscious evaluation of information. But in general, judgment is "quasi-rational"; it incorporates elements of both intuition and analytical thought" (Hammond and Grassia, 1985, p.235). Such a theory was developed on a series of experiments, from Brunswik to Hammond and colleagues, which showed the adaptive value of the different cognitive modes (Brunswik, 1943; Hammond, 1980, p. 17; Hammond, 2010, p. 37). This meant that a cognitive mode was not good or bad in and of itself but relative to a task, which itself induces a specific cognitive response. Another experiment by Hammond et al. showed that non analytical cognitive modes could not only be as effective as the analytical one, but also sometimes more effective (Hammond, et al., 1983, p. 47; Hammond, et al., 1984, p. 45). Moreover, the experiment suggested that the use of intuitive judgment in intuition-inducing tasks could be more accurate than by using analysis. This was a result running against, what Hammond and colleagues described as "run[ning] counter the current research-based suppositions, all of which argue in favor of the application of analytical solutions in all circumstances" (Hammond, 1988, p. 8). A good decision would therefore be one where the cognitive mode is aligned with the task characteristics (Hamm, 1988, p. 85). Further experiments by Hamm (Hamm, 1988) and Dunwoody et al. claimed to have confirmed such findings (Dunwoody, et al., 1999; Dunwoody, et al., 2000). As a consequence, such a theory offers a balanced perspective on cognitive processes, whose efficacy is evaluated in accordance with its congruence with the cognitive mode induced by the task.

1.5. Methodology

This research drew inspiration from the SJT, both in substance and in its methodological approach.

As far as the substance of the SJT is concerned, as developed above, it is first argued here that its insights and empirical findings offer a balanced and robust empirically grounded understanding of cognitive processes. Second, the SJT focuses on ambiguity and uncertainty, which are key task environments for negotiators, an environmental feature which is,

arguably, not so well dealt with by negotiation research. Last, the definitions of intuition and analysis proposed under the SJT in this section are adopted throughout this piece.

As far as the methodological impact of the SJT on this piece, it is argued here that it offered great merits, in that it emphasised the necessity of having not only an adequate sampling of subjects and also of tasks, which ought to be representative of the task environment of the subjects. A meta-analysis of negotiation research showed that students (in psychology, or business/MBA or unspecified specialism) made up about 81 % of the negotiation research samples over the 1965-2004 period (Buelens, et al., 2008, p. 332). Conversely, this study showed that professional negotiators represented only 2,5 % of the subjects sample for the 1994-2004 period. Such a situation points to a possible limited representativeness of the subjects used in negotiation research. More importantly, under the SJT perspective, it is essential that the tasks be representative of the normal universe of the subjects. This may often not be the case with the overwhelming use of students in negotiation research. As a consequence, the validity of much psychological research on negotiation may be somehow jeopardised. Conversely, the methodological approach taken in this thesis led to having representative subjects (professional negotiators working in a context where negotiation is paramount), and to having representative negotiation, since they are extracted from actual negotiation experiences of the interviewees.

This remark leads to noting that the methodology was qualitative, because it aimed at a better understanding of negotiators' cognitive processes as they experience them in actual negotiations. Indeed, according to Denzin and Lincoln, such an interpretive and naturalistic approach is what defines qualitative research (Denzin & Lincoln, 2000, p. 3).

Last, since this research heavily draws insights from SJT, and uses the latter as its analytical framework, this qualitative strategy used here is deductive/confirmatory in nature rather than inductive.

1.6. Outline of the thesis.

The second chapter reviews the literature and sets the scene of this study. In particular, it gives some background information on negotiation itself, including the inherent complexity and uncertainty negotiation has to cope with, and negotiation in the European Union, which makes up the context of the empirical investigation. Indeed, as indicated above,

the EU is the (epi)centre of international negotiations, be it within Europe or with many external partners (other international organisations, non EU member States). The EU therefore offers an intriguing context where its actors (EU staff, politicians, diplomats) negotiate in an intensive manner. This chapter also contrasts the dominant research paradigm with other perspectives where intuition is viewed more positively. A last section explains in more depth the important insights of Egon Brunswik, Kenneth Hammond and the Social Judgment Theory, which makes up the theoretical backbone of this research. The qualitative methodology employed in carrying out the investigation, based on a technique called explication interview, is described in the third chapter. The findings from the explication interviews with EU negotiators are elaborated in a fourth chapter, while some conclusions and possible impact for theory and for negotiation practice are detailed in a last part.

Chapter 2 Literature review

Introduction

This study investigates negotiation from the perspective of cognitive psychology. The latter is about investigating "mental activities" (Kendler, 1984, p. 12). When applied to the field of negotiation, this perspective promotes the view that, along with Carroll et al, "negotiator behavior can be viewed as the product of judgments made by negotiators" called "negotiator cognitions" (Carroll, et al., 1986, p. 5). Moreover, among the cognitive modes influencing negotiators' cognition, this research will focus on the concepts of "analysis" and "intuition".

This chapter will unpack such cognitive modes, and intuition in particular, as they are described by writers from different perspectives. In doing so, it will highlight the key themes and debates within the relevant literature, and the areas in which this study aimed to make a contribution. The first two sections sets the scene by giving a first definition of intuition and analysis in a more general perspective, and by giving some background information on the constituting elements of negotiation, including in the European Union (EU) context. The ensuing sections cover various perspectives on cognitive processes, with a special emphasis on the dominant research perspective in negotiation (section 3), the management (section 4), the expert performance and naturalistic decision-making perspectives (section 5) . A final section analyses in depth Brunswikian and Social Judgment Theory's insights, which make up the main theoretical framework of this study.

Section 1 Intuition: a brief introduction

“Intuition”, which is also popularly represented by the graphic terms of "guts" or "hunches", is a long established concept originating in philosophy (Heinzmann, 2002). For example, Williamson defined intuitions in philosophy as “just applications of our ordinary capacities for judgment” (Williamson, 2004, p. 109). As Chang recalled, intuition has more been taken up in other disciplines such as mathematics, art and ethics (Chang, 1954). Tracing its roots back to its philosophical origins, the concept is related to Aristotle's "Nous", to Plato's "Gnosis", to Kant's "sensibility" and to Husserl's "categorical intuition". French philosopher

Henri Bergson (Bergson, 2011 [1911]) considered intuition as the centre of the work of philosophy (Armstrong, 1914). Intuition is also present in Chinese philosophy (Chang, 1954, 111). At the junction of philosophy and psychology, Beth (Beth, 1958) called intuition a “conspicuity”, which is both indispensable to thought and decision and acquired and not innate. Beth also considered that intuition was the tip of the iceberg of our stock of tacit knowledge (Beth 1958). Moreover, several scholars noted that this construct is surrounded by substantial confusion (Dane & Pratt, 2007, p. 34; Sadler-Smith & Shefy, 2007), around its meaning, its process and the outcome as well as its difference with related constructs.

There exist dozens of definitions of “intuition”. However, one common element of all these definitions is the unconscious feature of intuition. Moreover, in most if not all cases, the different definitions pit intuition against explicit analysis. Yet, to Herbert Simon, intuitions are “analyzes frozen into habit and into the capacity for rapid response through recognition” (Simon, 1987, pp. 61 and 63). His definition therefore makes analysis and intuition complementary (Sadler-Smith & Sparrow, 2007), while apparently equating intuition with tacit knowledge. In the same vein, Pretz considered “inferential intuitions” as “judgments based on analytical modes that have become automatic through practice” (Pretz, 2011, p. 17), which she distinguished from “classic, holistic” intuition which were “qualitatively non-analytical and relies on holistic integration of cues” (Pretz, 2011, p. 18). Another common theme in many of these definitions is that intuition is at the intersection of cognition and emotion (Sadler-Smith and Shefy, 2007, p. 188). On their part, Dane & Pratt further unpacked the concept by distinguishing the process of intuiting from the outcome (Dane and Pratt, 2007). This led them to define intuitions as “affectively charged judgments that arise through rapid, nonconscious, and holistic associations” (Dane & Pratt, 2007, p. 40). From this definition, one can note the judgment and decision-making as well as emotional dimensions.

Intuition can also be associated with other concepts such as “tacit knowledge”, “implicit learning and knowledge”, “instinct”, “insight” and “creativity” (Hodgkinson, et al., 2008). To Sadler-Smith and Shefy, however, insight and intuition should be treated as distinct concepts: “Intuition may lead to insight; but some intuitions may not end in insightful moments but may remain as feelings-based judgments that may be difficult to articulate literally but which may be expressed through analogy, story, or metaphor” (Sadler-Smith & Shefy, 2007, pp. 189-190). Indeed, for several authors, contextually based intuitive actions are difficult or impossible to report verbally, and yet they would be the feature of the highest levels of expertise (Dreyfus, et al., 1986; Anders Ericsson, 2006). Such a difficulty in

articulating the processes and mechanisms behind intuition may be the cause of it being commonly dismissed as "irrational".

In attempting to combat such dismissive accounts, some authors have suggested that intuition allows the extraction of tacit knowledge and its translation in action, and could therefore be the link between tacit knowledge and our use of it. For instance, Sadler-Smith and Shefy (Sadler-Smith & Shefy, 2007, p. 189) and Hodgkinson et al, among others, noted that "the process of intuiting originates from an individual's store of tacit knowledge accreted through experience and explicit and implicit learning processes" (Hodgkinson, et al., 2008, p. 7). Memory is said to be playing a key role in this process: according to Simon, the development of a wide repertoire of patterns in memory is a key feature of experts, which "allows them to respond to contingencies in an automatic and proficient manner" (Simon, 1996). In addition, for several scholars, intuition could also and be better considered as a "hypothesis generator" (Atkinson & Claxton, 2000; Hodgkinson, et al., 2008; Sadler-Smith, 2008).

Such discussions and debates concerning the nature and importance (or otherwise) of intuition have been ongoing for some time. In spite of this, the scientific study of the concept remains fraught with difficulties, partly due to its "somewhat mystical connotation [...] in the general public" (Salas, et al., 2010, p. 943), but also in some academic circles (for a recent example: see chapters 16 and 17 in Sinclair, 2011).

At this stage, intuition is not defined as a sixth sense nor simply as "analyses frozen into habit" (Simon, 1987, p.61), but rather as an unconscious cognitive process, at least at the moment when it is employed, which is part of human beings' natural endowment.

The upcoming sections will further explore the concept, through specific perspectives, including that which will be used in this research; the task here is therefore simply to provide a brief overview of the concept.

Section 2 Negotiation: definition- main features.

This section will define and describe negotiation, its tasks and its environment, the background of this research. It will also describe the environment of the empirical side of the latter, that is, negotiations in the EU environment. Moreover, it will investigate the dominant paradigm in research on negotiation, and will review its impact on the understanding of cognitive processes of negotiators. In line with Kendler, it is argued here that a paradigm is "an approach to constructing theories, a style of theorizing" (Kendler, 1984, p. 19).

Given the space restrictions of this research, only what it is deemed essential for understanding negotiation will be presented here. It is suggested that many elements presented here may have an impact on the understanding of cognitive processes of negotiators.

In particular, and importantly, this section will survey the many negotiation task environments where intuition rather than analysis may be found due to high levels of ambiguity, uncertainty and complexity. The reasons why this is the case will be explicitly dealt with in section 4.

1. Origins- Definition-content

Negotiation is a very common occurrence as a human activity. It is one of the many ways to solve problems and to reach decisions in situations of interdependence (Dupont, 1994). Later sections will explore the connection between intuition and negotiation; the task here is to provide a brief overview of the concept.

The Merriam Webster dictionary defines "negotiation" as "a formal discussion between people who are trying to reach an agreement: an act of negotiating" (Merriam-Webster, 2010). Two elements stand out in such a definition: a communication aspect ("discussion") and a process aspect ("trying to reach agreement"). While this is obviously true, negotiation can also be considered- and is actually often analysed so- as a category of (joint) decision-making (Zartman, 1977; Pruitt, 1983; Carroll, et al., 1986, p. 2; Thompson, 1990; Dupont, 1994): people negotiate because they have to reach a decision together on some issue. They do so because their interdependence prevents one of the parties to making that decision on its own. In addition to the collective nature of negotiation as a joint decision-making

process, negotiation can also be considered from the perspective of *individuals* who have to decide in such situations of interdependence.

It is such a judgment and decision-making perspective, as opposed to a political or communication perspective on negotiation, which will be taken here and will be further developed below, and in particular in the findings chapter.

2. The nature and process of negotiation, particularly in the EU environment.

2. 1. Principal and agent and the need of justification.

Many negotiators (called "agents") negotiate on behalf of others ("principals") (Mnookin & Susskind, 1999). For instance, diplomats negotiate on behalf of their government, and not for their own interests. The negotiation literature considers the agent-principal relationship as one of the key dimensions in negotiation. Indeed, the principal usually sets the goals and instructions of the negotiation, and agents are accountable to the principals, to whom negotiators have to explain and justify their decisions. Moreover, political scientist Anderson pointed to the unacceptability, in international politics, of new decision proposals which cannot be justified by arguments or which are not based on precedents, due to the necessity of consistency (Anderson, 1981, p. 738).

One of the difficulties encountered by agents comes from the fact that they often have a higher and more nuanced understanding of the reality of the negotiation "on the ground" than their principals (Cutcher-Gershenfeld & Watkins, 1999, p. 14 & 36). This is particularly true not only as far as information is concerned but also for the people dimension, since they are in direct interaction with the other parties. Moreover, Halperin claimed that "participants advocating a change in policy must state some argument in favor of the change even if they do not feel free to state either the reasons that lead them to favor a new policy or those they believe would persuade others in private" (Halperin, et al., 1974, pp. 136-137). As a consequence, to quote Cutcher-Gershenfeld & Watkins, this means that negotiators have to "reshap[e] [their principal]'s perceptions of their interests" in order to avoid a mismatch between the latter and the realities at the negotiation table (Cutcher-Gershenfeld & Watkins, 1999, p. 24 & 38).

2.2. Negotiation: uncertainty, complexity and dilemmas

It is argued here that uncertainty, dilemmas, complexity and the management of contradictions are important features of negotiation environments, particularly in a political and policy context. The following sub-sections will unpack these three key features of negotiation.

. Such uncertain environments are therefore likely to bring about intuition rather than analysis, because there are few if any rule (except possibly the reliance on the ambiguous guidance of experience) to be applied in such circumstances. As a consequence, such features of the environment may well be favourable for the use of intuition by negotiators. This critical aspect will be further developed in section 5.

2.2.1. Uncertainty

The unexpected, surprise moves and critical moments are a common and key occurrence in negotiation (Susskind, 2004; Stuart Jr., 2004; Winship, 2004). Indeed, negotiation scholar Michael Wheeler pointed out that uncertainty is a key environmental factor for negotiators, be it about “the attitudes and behavior of other parties, and the inevitable uncertainty about what path negotiation will take” (Wheeler, 2004, p. 153). Balanchandra et al defined uncertainty in the negotiation context as “external events outside the control of the parties- unexpected outbursts, accidentally pressing someone’s “emotional hot button”, learning critical new facts about the issues being negotiated” (Balashandra, et al., 2005, p. 416). The unexpected can also be “positive” such as when the other party gives a much better opening position than you expected (Swindling, 2009).

Moreover, several political scientists noted that uncertainty is also a key feature of political problems (Winham, 1979, p. 8; George, 1980, pp. 25-26). Uncertainty is also intimately linked to the dilemmas mentioned below. George defined uncertainty as “the lack of adequate information about the situation at hand and/or the inadequacy of available general knowledge needed for assessing the expected outcomes of different courses of action” (George, 1980, p. 27). Hampson pointed to an increased uncertainty in a multilateral setting, which is a feature of EU negotiations: “[t]he chief obstacles to multilateral negotiations are complexity and uncertainty. [...] uncertainty [is] heightened by the difficulties of communicating preferences and exchanging information among a large number of participants” (Hampson, 1999, p. 23). Negotiations in the EU environment often

correspond to such a description, since they involve multiple negotiation partners and highly complex political and technical issues, from trade to agriculture to technical standards. Moreover, facing dilemmas and making trade-offs are permanent features of an uncertain environment like that of political negotiations. Indeed, there are usually more than one possible solution- which is why there is a negotiation and not a simple decision-, and "there is no ultimate guideline by which to evaluate the results of the negotiation" (Winham, 1977 (b), p. 93).

2.2.2. Complexity

Zartman pointed to the utter complexity of negotiations as a key feature (Zartman, 1994, p. 3). Hampson attributed such a complexity to the number of parties to such negotiations as well as to the number of issues at stake (Hampson 1995:23 in Tallberg, 2006, p. 26). Winham pointed out that international negotiations in general deal with "a portfolio of staggering complexity, which would be unknowable in any sense in which we might apply the term" (Winham, 1977 (b), p. 92). As a consequence, international negotiations increase subjective and objective complexity (Winham, 1977 (a), pp. 348-349), objects can be complicated in and of themselves, and can be too complex to be grasped by negotiators. Winham defined, following Steinbruner (Steinbruner, 1974), such an environment as being under "structural uncertainty" (Winham, 1977 (b), p. 101).

Because of its multilateral setting, its complex environment as well as through the very issues it is dealing with in its negotiations, the European Union itself is "characterised by a growing complexity" (Bomberg, et al., 2011, p. 15). Indeed, negotiations within the EU take place between 28 member States, each with its own national agenda, the European Commission and the European Parliament, and between the EU and external actors (non EU member States, international organisations). In terms of issues, such negotiations cover anything from international research cooperation agreements, to budget to pollution levels to human rights, many of which are often of extreme intrinsic complexity.

It is contended that such a complex EU environment might be relevant to intuition, in that it may be more prone to intuition rather than to analysis.

2.2.3. Dilemmas

Negotiators, as decision-makers in the broad sense, usually face a series of dilemmas (Dupont, 1994; Steele & Beasor, 1999; Lempereur & Colson, 2010). Mnookin et al. defined a dilemma as “a choice that is irreversible and has important consequences” (Mnookin & Susskind, 1999, p. 35). For instance, negotiation research pioneers Walton and McKersie characterized the dilemma between a competitive and a cooperative approach as a "central challenge" (Walton & McKersie, 1992, p. 280). Lax and Sebenius called such a key tension the “negotiator’s dilemma” (Lax & Sebenius, 1986). The latter originates in game theory's "prisoners' dilemma", where "the best outcome for one person is not necessarily the best for both, but if both pursue their best option, they will often both get the worst outcome" (Sprangler, 2003).

Moreover, Audebert identified four key moments when negotiators are particularly facing dilemmas: from the decision to start a negotiation, when engaging the other party, to the decision on concessions to the conclusion phase, where the dilemma between cooperation and competition is at its climax (Audebert, 2005, p. 161). In addition to these time-related dilemmas, Mastenbroek suggested that negotiating is about managing a "range of dilemmas" (Mastenbroeck, 1980, pp. 16 & 27).

2.3. Negotiation as a social judgment (sizing up people and dynamics).

Blanch-Hartigan defines "sizing up people", a phrase often used in negotiation literature and practice, as “the judgment or interpretation of the internal states and traits of others. Person perception is broad and includes judgments of others’ thoughts, emotions, personality, status, and intentions” (Blanch-Hartigan, et al., 2012, p. 48). More specifically, it is about “inferring the deeper characteristics of another person” (Hammond, 2000, p. 44) and “making correct judgments about events in a social group so that one’s social behavior is guided accordingly” (Hammond, 2007, p. 85).

Such a practice represents by some account between 65% (Duke, 1974, p. 397) and 80% of communication (Lieberman & Rosenthal, 2001) and consists in assessing verbal as well as non verbal communication . Drake pointed out that it is a cognitive activity that all human beings are constantly engaged in (Drake, 1972, p. 1). Moreover, Arkes and Hammond argued that judgments about our social environment, the people in it and their ideas make up

the most of our daily decisions (Arkes & Hammond, 1986, p. 395). Some if not most of such social judgments are not conscious when they are made and are therefore intuitive.

Negotiators are constantly engaged in interpreting verbal and non verbal messages from the other parties (for instance, Hendon, et al., 1996, pp 61-62; Blascovich & Hartel, 2008, p.49). A message that is consciously emitted and received, in accordance with a common code, is called a signal, which diplomatic negotiations heavily rely on (for instance, Cohen, 1987; Rana, 2001; Jervis, 1976) As Jönsson and Hall put it, negotiations in a diplomatic environment are carried out under “constructive ambiguity”, that is the tension between clarity and ambiguity (Jönsson & Hall, 2002, p. 5). It is a feature of diplomatic negotiations (Jönsson & Hall, 2002, p. 5), an environment in which EU negotiations operate. As a consequence, to quote Jönsson and Hall, “[such a situation] impels diplomats to spend much time and effort on the formulation and interpretation of signals” (Jönsson & Hall, 2002, p. 6). In addition to signs and signals, negotiators have to assess, size up or understand the negotiation dynamics or situation (Tung & Strand, 1993; Watkins, 2002, p. xiv; Liu & Chai, 2011, p. 15). As a consequence, being able to size up the personality of the other negotiator and/or the dynamics of a negotiation is a crucial skill for negotiators (Pye, 1982, p. 52; Curry, 1998, p. 37; Hodge, 2000, p. 209; Business Literacy for HR Professionals, 2005, pp. 145-147; Thompson, 2007, p. 53; Moore & Woodrow, 2010, p. 154). Given the unconscious nature of the process, as alluded above, such circumstances may be favourable to the use of intuition by negotiators.

2.4. Negotiation in the EU context.

2.4.1. Negotiation and the European Union.

This research will focus on negotiations in the context of the European Union (EU) institutions. The latter are made up of the European Parliament, the European Council, the Council of Ministers, the European Commission, the Courts as well as specific organs and agencies. The EU is a hybrid international organisation- in between an international organisation and a Federal European State- which has 28 European Member States. It is the focus of this research.

European Union officials, and national diplomats representing their Member States to the EU, spend much of their time negotiating, not only internally like any other managers (Lax & Sebenius, 1986) but also externally, with various stakeholders, including EU member

States and foreign States and organisations (Elgström, 2004; Lempereur & Colson, 2008; Lempereur, 2009). Literally thousands of formal and informal negotiation sessions are conducted each year in such a context.

Negotiating in the EU setting is not a simple task among others for their staff, it is a core working method and activity and even a value in itself. Indeed, as Dür et al. noted, negotiations in this context are described as "central to the ethos and functioning of the European Union" (Dür, et al., 2013, p. i). In the absence of other power-related means of influence, the EU can only rely on law, influence and negotiation to achieve its objectives.

2.4.2. Political negotiations

About 10,000 staff in the European Commission alone, that is about 25% of the workforce, are involved in the broad field of coordination and negotiation of legislative and policy initiatives (Kuus, 2011, p. 7). Negotiations within the EU or negotiations of the EU with external stakeholders have therefore a political nature.

It is contended here, and further developed below, that the political nature of the negotiations in the EU context may have an impact on the cognitive processes of negotiators. Indeed, it is argued, and developed later, that the political environment may induce weaker cognitive modes in specific circumstances.

2.4.3. Legal and bureaucratic environment

To quote King and Zeckhauser, "all laws are born of negotiation" (King & Zeckhauser, 1999, p. 203). This is certainly the case in the EU. Indeed, the EU institutions make Laws ("European Law") applicable across the 28 Member States.

It also upholds a democratic system based on the rule of law. The finding and construction of the adequate legal bases for decisions is a key element in the EU decision-making and negotiation processes. Moreover, since all its decisions are susceptible to review before the European Courts (General Court and Court of Justice) by citizens, corporations, organizations and States alike, special attention is devoted to legal matters: it is an environment where legalism reigns supreme. Indeed, Craig and de Burca pointed out that "the EU governs primarily through rule-making, including establishing further procedures for rule-making, and monitoring compliance these rules" (Stone Sweet, 2011, p. 146; Kelemen, 2011). The EU institutions also produce a vast quantity of internal rules to ensure a proper functioning, for example the Financial Regulation for budget matters, which ought to be

abided to by all staff, including negotiators. More specifically, the legality of a decision, be it administrative or related to negotiations, will be assessed by its logic and coherence with the existing rules. This will take the form of a legal reasoning, carried out by lawyers and negotiators (obviously not at the same level of detail). Cognitively speaking, legal reasoning is often considered “the epitome of rationality” (Sitkin & Bies, 1993, p. 348). Based on logic (Natt Gantt, 2007, p. 473) and analysis, legal reasoning is all about coherence (Raz, 1992; Natt Gantt, 2007, p. 441), both internally (the consistency of the argument) and externally (coherence with the body of applicable laws). Moreover, the justification of any decision through a legal basis enhances the authority associated with such a decision (Sitkin & Bies, 1993, p. 346), while, in the same time, “limit[ing] organizational flexibility and managerial discretion” (Sitkin & Bies, 1993, p. 346). Moreover, it “may lock negotiations onto the wrong historical path or result in meaningless lowest common denominator solutions” (Alvarez, 2002, p. 222).

Such an environment may have a cognitive impact, since it induces negotiators to systematically compare possible negotiation solutions with legality, thereby inducing cognition towards a coherence strategy and a more analytical cognitive tactic.

Section 3 Analysis and intuition in the dominant paradigms in Negotiation research and training

1. The dominant paradigms in negotiation research and training.

Negotiation as a field for academic research started in the 1960s with Schelling, Iklé, Walton and Mc Kersie (Dupont, 2006, p. 27). However, it was only in the 1970s and 1980s that research on negotiation really took off, with the pioneering works of, among others, Pruitt, Raiffa, Zartman and Druckman (Dupont, 2006, p. 34).

However, negotiation is not a theoretically unified discipline, being analysed through a great variety of approaches, from game theory to sociology, to political science to psychology (Kremenjuk, 2002; Dupont, 2006). As a consequence, there is apparently no universal theoretical framework for analyzing negotiation (Dupont, 2006), except a few commonly agreed principles (Honeyman & Kupfer Schneider, 2004; Avruch, 2006), and two dominant

paradigms (Fulmer & Barry, 2004; Dupont, 2006; Lempereur, 2006), which will be reviewed below.

Among these disciplines, judgment and decision-making theories have had an important if not decisive impact (Raiffa, et al., 2002; Fulmer & Barry, 2004; Dupont, 2006; Lempereur, 2006). Fulmer called this perspective the "cognitive decision-making approach" (Fulmer & Barry, 2004, p. 245). Indeed, negotiation can be considered a judgment and decision-making task (Fisher & Ury, 1981; Mumpower, 1991, p. 1305). Senior negotiation scholar Zartman called it "a joint decision-making process" (Zartman, 2008), while Neale and Bazerman viewed it as (cognitive) judgment-making process (Neale & Bazerman, 1985). Bazerman and Carroll added that "each party to the negotiation is a decision maker" (Bazerman & Carroll, 1987, p. 249). On his part, Druckman, another scholar at the forefront of negotiation research, pointed out that "negotiation is a method of social decision-making" (Druckman, 1977, p. 41).

2. Cognitive processes in the dominant negotiation research paradigms.

Negotiation's reference book by Fisher & Ury's, "Getting to yes", did not mention at all cognitive modes (Fisher & Ury, 1981). It related somehow to "perceptions", which are simply defined as "understanding the other side's thinking" (Fisher & Ury, 1981, p. 22), but did not mention cognitive modes. In a later book, Fisher and Brown nuanced the need for rationality with the necessity of taking into account of the emotions, but still with no mention of the cognition of the other side or the task environment (Fisher & Brown, 1988, pp. 44-63). On their part, several authors considered intuition as a personality trait, as measured for instance by the Myers Briggs Type indicators, rather than as a cognitive mode applicable to anyone (Brown & Chadwick, 1986; Peters, 1993; Heen & Richardson, 2005, p. 38).

The judgment and decision-making approach focused on the circumstances that determine the behaviour of negotiators (Fulmer & Barry, 2004, pp. 245-246), that is, "given a particular situation or context, individual negotiators are expected to react in more or less the same ways within the confines of bounded rationality, and to be subject to similar kinds of biases and decision making "errors"" (Fulmer & Barry, 2004, pp. 245-246). Indeed, most of the theories in this field revolved around the concept of rationality (Radtchenko-Draillard, 2011), and particularly around Simon's bounded rationality (Lempereur, 2006, p. 166; Dupont, 2006, pp. 142-143). While the former insists on the individual and his/her interests, the latter focuses on the limits of rationality. On its part, Kahneman and Tversky's approach is often

described as what Thompson called “[f]aulty decision making”, which she described as the most highly regarded descriptive theory of negotiation (Thompson, 2006, p. 3). In both paradigms, which will be reviewed in turn below, the use of intuitive cognitive mode is considered defective.

2.1. Bounded Rationality.

Bounded rationality, the first pillar of negotiation research, tried to model one or several mental or environmental constraints on judgment and decision-making, and pointed to "the limits upon the ability of human beings to adapt optimally, or even satisfactorily, to complex environments (Simon, 1991, p. 132). It was in many ways a reaction against the artificiality of game theoretical approach. According to Kahneman, Simon's concept meant that "decision makers should be viewed as boundedly rational, and [...] a model in which utility maximization was replaced by satisficing" (Kahneman, 2003, p. 1449). Optimization of full rationality was in essence retained but limited by the trade-off between cost and benefit (Gigerenzer, 2008, p. 5). As Hammond put it, «Simon's emphasis is on rational analytical cognition within a bounded problem space” (Hammond, 2010, p. 10). Here, explicit analysis is treated as the only acceptable cognitive mode, and intuition has no place as it is considered as irrational.

2.2. Cognitive psychology and cognitive illusions

Cognitive psychology is the second most influential paradigm in negotiation research. The heuristic and biases perspectives and the dual process theory have had a tremendous impact on the dominant negotiation research paradigm.

2.2.1. The heuristic and biases perspective.

Kahneman, Tversky and their school of thought developed what became known as the “heuristics and biases” approach. As Kahneman himself acknowledged, the latter's emphasis was put on “anomalies that violate normative standards of belief or choice” (Kahneman, 1991, p. 143). Tversky and Kahneman argued that “the deviations of actual behavior from the normative model are too widespread to be ignored, too systematic to be dismissed as random error, and too fundamental to be accommodated by relaxing the normative system” (Tversky

& Kahneman, 1986, p. S252). One of the features of this perspective is therefore that it considers that human beings act irrationally most of the time (Gustafsson, 2006, p. 13).

As far as cognitive modes are concerned, Gustafsson noted that such an approach is therefore “critical of ordinary (intuitive, unaided) reasoning and promotes more valid methods of decision analysis” (Gustafsson, 2006, p. 12), which are considered as inefficient and irrational (for instance, (Tversky & Kahneman, 1974; Kahneman, 2011).

It is interesting to note that Kahneman in his 2011 book acknowledged that “the confidence we have in our intuitive beliefs and preferences is usually justified”, even though he hastened to add “but not always” (Kahneman, 2011, p. 4). Whereas Kahneman never ceased to consider intuition as defective, this book is all about it, “the hero of the book”, as he put it (Kahneman, 2011, p. 21). He justified such an interest by suggesting that biases affecting judgment and decision-making were not the same as those affecting intuitive judgments under uncertainty. In such an approach, analysis remains the key cognitive process and in opposition to intuition.

2.2.2. The Dual process theory perspective.

Stanovitch and West’s popular dual-process theory of human decision-making and reasoning suggested that there were two sets of processes or systems involved in human decision-making (Stanovich & West, 2000): *analytical decision making* (also called deliberative or “system 2”) and *intuitive decision making (or “system 1”)*. Such an approach offers an interesting contrast between analytical and intuitive decision-making. Given its importance in the decision-making as well as negotiation research literature (Malhotra & Bazerman, 2008; Tsai & Bazerman, 2009; De Cremer & Pillutia, 2012), it is suggested to review its meaning, its merits and limits.

Analytical decision-making (system 2)

Mosier defined analysis as a “step-by-step, conscious, logically defensible process with a high degree of cognitive control” (Mosier, 2009, p. 155). The great advantages of System 2 are that it allows individuals to learn information deliberately, to develop ideas, and to engage in analyses in an attentive manner. Explicit thinking is the main feature and “it often involves the conscious use of different types of prior knowledge, and their application to new situations” (Eraut, 2007, p. 407). On the other hand, it is “slower [...] and cognitively effortful” (Salas, et al., 2010, p. 945).

Intuitive decision-making (“System 1”)

Intuition is described here as “the opposite of analysis— a cognitive process that somehow produces an answer, solution, or idea without the use of a conscious, logically defensible, step-by-step process” (Hammond, 1996, p. 60). In terms of features, this system is “fast, holistic, and does not require conscious cognitive effort” (Salas, et al., 2010, p. 945). Indeed, Dane and Pratt noted that this system “involves the automatic and relatively effortless processing and learning of information” (Dane & Pratt, 2007, pp. 35-36). This fast, effortless and unconscious thinking process is said to be often quite effective (Engel & Singer, 2007, p. 13), though it is susceptible to errors and to biases (Kahneman, 2011). It is also considered to be “pattern-recognition based” (Eraut, 2000; Eraut, 2007; Patterson, et al., 2009, p. 334; Kahneman, 2011). Yet, the most obvious drawback is the difficulty to control such an unconscious cognitive activity.

The following chart summarizes the main features of both systems.

Chart 1 Features of System 1 and System 2

	System 1	System 2
Cognitive processing	Unconscious	Conscious
Speed	Fast, even automatic	Slow
effort	Little or none	effortful
Functions	Domain-specific and contextualized	Abstract
Mode of processing	Associative parallel processing	Sequential and rule-based processing
Individual differences	Limited because independent of working memory and general intelligence	wide
Cognitive control	Little or none	Associated with experience of agency, choice concentration
capability	Innate or through prolonged practice	learned
Impact of disruption	limited	important
Cognitive production	May generate complex	Thoughts through orderly

	patterns of ideas	steps
Can learn	Association between ideas, or skills such as reading or understanding nuances of social situations	Complex thought and skills
Mutual influence	Feeds suggestions for system 2 (impressions, intuitions, intentions, feelings)	Can change the way system 1 works
In case of trouble	Calls on system 2	<ul style="list-style-type: none"> - Has the last word - In charge of self control
Susceptibility to errors and biases	Yes	yes

Sources: Evans, 2008, p. 257; Kahneman, 2011, pp19-108

Conclusions

1. The merits of the dominant paradigms.

The rational approach to negotiation has been instrumental in understanding negotiation processes and in prescribing better negotiation behaviours (Avruch, 2006, p. 569). Indeed, by framing negotiation as a rational process, which can be understood and investigated scientifically, it has been instrumental in taking this skill out of the realm of innate abilities into that of training and of academic research. In addition, cognitive psychology undeniably shed an important light on the cognitive limits of the human brain, and helped explain certain phenomena, including failures of negotiations.

2. The prescriptive impact of such paradigms on negotiators

Negotiation is not only a field of research, it is also and primarily a skill and a professional activity. As Cobb noted, “[s]tudents of negotiation often ask instructors to deliver a set of strategic moves that would routinely (if not inevitably) lead to effective negotiation” (Cobb, 2000, p. 315). In that respect, the dominant paradigm, be it based on bounded

rationality or on cognitive psychology, prescribes that negotiators should exclusively focus on negotiation's "rational" aspects, understood restrictively as the use of the analytical cognitive mode. This is evidenced not only by the titles of books and articles of leading negotiation researchers (such as Bazerman and Neale's "negotiating rationally" (Bazerman & Neale, 1993; Bazerman & Malhotra, 2007) or the paradigmatic orientations of most pieces of negotiation research (for instance, chapter 6 "Negotiating rationally in an irrational world" of Malhotra and Bazerman (Malhotra & Bazerman, 2008)). So-called "intuitive negotiations" have therefore become the epitome of a naïve or dangerous way of negotiating (Lempereur, 2003; Lempereur & Colson, 2004; Bazerman & Malhotra, 2007; Malhotra & Bazerman, 2008).

In addition, Thompson listed the reliance of intuition as the last of the six most common negotiation myths she intended to "debunk" (Thompson, 2011, p. 28). To Bazerman, "with the use of intuition comes the potential for significant psychological biases that lead to irrationality" (Bazerman & Malhotra, 2007, p. 1). As a consequence, intuition is considered to be giving sub-optimal outcomes at best (Tsai & Bazerman, 2009) or as a behavioural peculiarity of non Western negotiators (Osman-Gani & Tan, 2002).

As a consequence, negotiators are prescribed by such scholars to relinquish their use of a natural cognitive mode (intuition) for the benefit of analysis, in all circumstances.

3. Main gaps and problems of the dominant paradigms.

First, in the dominant paradigm, rationality is understood restrictively as the application of analytical methods in order to achieve logics or consistency; however, negotiation is also a social judgment, that is, about judging the behaviour of other negotiators, which arguably requires perceptual accuracy instead of logical rationality, that is, about inferring what the behaviour really means instead of simply understanding the apparent logics of it. In particular, it does not address adequately the difficulty of inferring motives from behavior, of distinguishing between strategies and underlying motives. This means that it is unable to address the fact that "motives are not the primary motive in particular situation [and that] certain aspects of negotiation may be rooted in other psychological processes" (Druckman, 1977, p. 22). Second, it is argued that the dominant paradigm does not fully take into account the environment of the negotiators, and in particular the impact of specific tasks on cognitive processes, for instance, the impact of uncertainty. Third, it focuses exclusively, on motivational aspects and on cognitive errors, leaving aside the cognitive modes of both

parties. Fourth, as alluded above, some research suggested that negotiators do use intuitive modes (Tsai & Bazerman, 2009, p. 14). Intuition is indeed a cognitive process which is well known by negotiators, particularly by seasoned ones (Thompson, 2009; Thompson, 2011), including diplomats (Bacchus, 1977; Thuysbaert, 2006). One can wonder whether these professionals are to be seen as victim of cognitive biases, as suggested by the dominant paradigm, or whether this could be another case of, as negotiation scholar Avruch put it, “the real world’s bloody-minded obstinacy in simply not conforming to theory” (Avruch, 2006, p. 569), that is to say that theory does not represent reality adequately. In addition, such a perspective came with a dear price: the discounting of the rationality of other negotiators. Raiffa called this “asymmetrical strategy”, that is, the negotiator should have a rational behavior but should expect an irrational attitude from the other party (Dupont, 2006, p. 143). It is contended that such a perspective could lead to an overestimation of oneself or to an underestimation of the other negotiator (who would be acting, respectively, fully rationally or irrationally). In addition, it is interesting to note that Bazerman and Neale’s nine (analytical) prescriptions revolve around the necessity of assessing a series of elements (Bazerman & Neale, 1993) (my emphasis), which is a skill which requires judgment, that is, a non fully analytical cognitive mode. It is simply so because no analytical method or rule exists to do it. Even though negotiators can use analytical techniques to implement such prescriptions in very simple and quantitative negotiations, it is important to point out that most negotiations, particularly in the policy and political fields, involve choices, value trade-offs and other non quantitative elements which are not easily amenable, to say the least, to mere analysis. As a consequence, the “assessment” which is required of negotiators, will necessitate some sort of subjective appreciation, based on experience for instance, which is far cry from the purely “rational” approach advocated by such authors.

Moreover, at a more general level, it is argued here that this is contributing to a strange picture of the human mind, in which human beings would be supposed to act irrationally most of the time (Gustafsson, 2006, p. 13), even though its main proponents rejected (mildly) such an assertion (for instance Kahneman in his latest book, Kahneman, 2011). However, Steinbruner noted that such an assumption contradicted reality: “the basic observations that human beings are on the whole highly successful in most of their tasks in spite of the assumed irrationality begs the question, which pointing out apparent failures of rationality in relatively rare and esoteric circumstances” does not” (Steinbruner, 1974, p. 48). The faulty decision-making perspective is even stranger when one considers that “in work on

lower animals much choice behavior seems consistent with optimizing principles" (Einhorn & Hogarth, 1981, p. 55). If this is true with animals, it would be surprising if it were not the case different with human beings in general and with the professional negotiators in particular.

This question leads to the asking whether the prescriptions of the dominant negotiation paradigm are congruent with reality. Moreover, from an epistemological and methodological perspective, one can wonder whether results of the laboratory-based experiments can reliably be generalized to real-life settings. As shown in the methodology chapter, most of negotiation-related experiments have been carried out on students and on tasks with a limited resemblance, allegedly for good methodological reasons, with the complex reality encountered by negotiators. In that respect, this lack of "realism" is also a cause for concern for the training actions themselves (Pekar Lempereur, 2002), which often (over)simplify the environmental situations faced by negotiators. In a rare discussion in negotiation research on the tension between descriptive and prescriptive models, several negotiation scholars called for a useful *descriptive* model of negotiation: "[w]e believe that it is necessary to develop a better descriptive understanding of the decision processes of negotiators, rather than simply prescribing how rational actors would make decisions" (Carroll, et al., 1986, p. 5). Martin interestingly added that "[t]hese and other efforts reveal that the differences among scholars over how best to examine negotiation are largely methodological problems involving the question of whether it is appropriate to generalize about negotiation and, if so, to what degree" (Martin, 1988, p. 47). Martin's remark encapsulates the need for a new negotiation research approach, and beyond that, for a new negotiation training approach, which is based on theories "in line" with actual practice, that is, based on a more accurate descriptive theory of negotiation. Bottom et al. advocated for a theory which would help further understanding of "the actual behavior of negotiators and to work towards a truly descriptive theory" (Bottom, et al., 2007, p. 18). Bazerman and Neale further argued that "the most powerful and useful descriptions need a prescriptive anchor to provide clear specifications of the actual decisions and behaviors of negotiators", adding that "ideally, a theory that predicts the opponent's behavior, with the necessary specification of the risk surrounding this assessment, would be very attractive" (Bazerman & Neale, 1991, p. 124). Moreover, Patton attributed the lack of testing in a realistic setting, "not least because the research techniques needed are not fully developed" (Patton, 2000, p. 13).

It is argued in this research that such a theory and such research techniques exist: Hammond's Social Judgment theory (Hammond & Grassia, 1985 ; Hammond, 1996; Hammond, 2000; Hammond, 2007), which is described further below. Such a theory is descriptive in nature and

- takes into account the whole cognitive spectrum (from analysis to intuition)
- rests upon representative tasks of the environment of the decision-maker,
- is a domain independent theory, which has a robust empirical foundation;
- gives a critical importance to the task environment in general and to uncertainty in particular, which is a core element of the environment of negotiators,
- provides a prediction of the cognitive mode based on the task environment

As a consequence, it is argued in this research that such a theory can account for the natural, and effective, use of intuition by negotiators in uncertain task environments, in stark contrast with the dominant negotiation research paradigm.

Before developing this approach, the treatment of cognitive processes in other perspectives, such as management, expert performance and naturalistic decision-making, in which intuition is considered more positively, are briefly explored in the upcoming section by way of background.

Section 4 The Management research perspective.

This section aims at presenting another important academic perspective on cognitive processes, and on intuition in particular, which is in contrast with the perspective reviewed above, as a first challenge of dominant paradigms in negotiation.

Historically, the first mention of the concept of intuition in contemporary management research dates back to the early twentieth century, with George van Ness Dearborn, C.G. Jung and especially Chester Irving Barnard (Akinci & Sadler-Smith, 2011), considered a forerunner in the study on intuition and tacit knowledge (Sadler-Smith & Sparrow, 2007). Barnard distinguished what he called logical and non logical mental processes (Barnard, 1971 [1938], p. 302). He defined logical processes as conscious and expressible in words or reasoning, whereas non-logical processes were “known through judgment, decision and action” (Barnard, 1971 [1938], p. 302). Barnard was cautious about the supposed higher value of the logical processes, while he considered that non logical ones

could be considered as “good sense”, intuition, inspiration or even ‘genius’” (Barnard, 1971 [1938], pp. 303 and 305). He also pointed out that, in spite of its weaknesses, executives needed intuition for their decision-making. Barnard defined it as “a feeling “in our marrow” [which] is probably the outcome of previous experience that *has not yet emerged* into articulate thought. Its very vagueness shields it from critical scrutiny” (Barnard, 1971 [1938], p. 306, italics in the original).

Intuition in management fell from grace however with the advent of the rational analytical school in management research and thinking. However, a number of scholars reactivated the interest in the construct in recent years (Agor, 1986; Dreyfus, et al., 1986; Sadler-Smith & Shefy, 2004; Hodgkinson, et al., 2008; Klein, 2011) notably because they noted that intuition, or “gut” (or “marrow”) feelings, was inevitable (Sadler-Smith & Shefy, 2004, p. 84; Hammond, 2010, p. 329), and because they were “both involuntary and pervasive in work and personal life” (Sadler-Smith & Burke, 2009, p. 240). In addition, these authors noted that “although people (i.e., students, managers, employees) experience and use intuition, they are typically not well versed with regard to its nature, its significance, and how they could be trained to cope with both its pitfalls and its potential” (Sadler-Smith & Burke, 2009, p. 240).

Authors like, Sadler-Smith and Shefy and Hodgkinson noted the relationship between tacit knowledge originating from personal experience and other forms of learning and the intuition process (Sadler-Smith & Shefy, 2007, p. 189; Hodgkinson, et al., 2008, p. 7). Cognition and action are therefore in a critical interactive relationship (Crossan, et al., 1999).

In addition to the above person-specific factors (Sadler-Smith & Burke, 2009, p. 243), the management literature pointed to the importance of context or situational factors in the occurrence of intuition (Agor, 1986, p. 9; Eraut, 2000, pp. 119-120; Sadler-Smith & Sparrow, 2007, p. 11; Sadler-Smith & Burke, 2009, p. 240; Salas, et al., 2010). Among the latter, there are:

- organisational contextual factors, such as "constraints and conventions, accountability and hierarchy, team dynamics and organizational culture" (Hensman & Sadler-Smith, 2011),

- task factors (Dreyfus, 1983, p. 61; Mintzberg & Westley, 2001, p. 93; Salas, et al., 2010, p. 948; Pretz, 2011, p. 17; Sinclair, 2011, p. 11), yet without investigating in depth their possible impact.

Moreover, Agor and Vance et al noted that the increased use of non analytical thinking with higher levels of seniority (Agor, 1986; Vance, et al., 2007). For instance, Vance, et al. reported that "empirical research has supported the notion that significantly higher levels of intuitive, non linear thinking styles are associated with greater levels of seniority, while lower levels of employees are characterised by greater levels of linear, analytical thinking" (Vance, et al., 2007, p. 181). The alleged reason is that senior managers not only have (normally) more experience but also are facing more uncertain environments. Indeed, contextually, highly complex tasks, short term horizons, turbulent environments (Dane & Pratt, 2007, p. 3), or time limits, choice between several plausible alternatives, lack of "facts" (Agor, 1986), all of which are common to senior management, would be key environmental factors leading to its occurrence.

Out of this brief overview stems an overall positive perception in management research of non analytical cognitive processes.

Section 5 Expertise and expert performance; naturalistic decision-making

Research on expertise and expert performance, and on naturalistic decision-making, also point to the (critical) relevance of intuition. The limitations of this study only allow their very cursory review.

Anders Ericsson defined expertise as "the characteristics, skills, and knowledge that distinguish experts from novices and less experienced people", and expert performance as "the superior reproducible performance of representative tasks" (Anders Ericsson, 2006, p. 3).

Research showed that expertise goes beyond a mastery of deliberative strategies, to include metacognitive and intuitive skills (Anders Ericsson, 2006; Quirk, 2006; Salas, et al., 2010). Hogarth even contended that intuition is not simply a feature of expertise, it is a form of expertise (Hogarth, 2001, p. 204). To Dreyfus & Dreyfus, "intuitive judgment is the hallmark of expertise" (Dreyfus & Dreyfus, 2005, p. 779). They considered that skill acquisition could be modeled on 5 stages, with "novice" at the first level and "expertise" the apex (Dreyfus, 1983, p. 59) and where intuition is the principal cognitive mode. Moreover, Dreyfus argued that experts used principally an intuitive decision-making mode, which derived from their experience (Dreyfus, 1983, p. 60).

On its part, research on naturalistic decision-making (NDM) focused on the expert and tries to go away from "normative prescriptions" towards "understanding the process of

developing and applying [...] expertise in context" (Ross, et al., 2006, pp. 404-405). Zsombok et al. stated that NDM aimed "to address how people can make decisions in situations where the conditions are changing over time, where information is ambiguous, and where the plausibility of potential goals and courses of action is shifting over time" (Zsombok, et al., 1992). More precisely, NDM aimed to study decision-making processes in real-world settings (Lipshitz & Shulimovitz, 2007; Klein, 2008, p. 456), as opposed to laboratory settings.

Salas et al. made an interesting direct connection between expertise and intuition, with the notion of expertise based intuition, that is, intuition rooted in extensive experience within a specific domain, pattern recognition and automaticity (Salas, et al., 2010). This intimate link between intuition and experience has been emphasised by many authors (for instance: (Klein, 1997; Hogarth, 2001; Dreyfus & Dreyfus, 2005; Sadler-Smith & Sparrow, 2007).

To deal with such naturalistic contexts, this new paradigm developed the "recognition-primed decision (RPD) model", which Klein et al. defined as "describ[ing] how people use their experience in the form of a repertoire of patterns [...] explain[ing] how people can make good decisions without comparing options" (Klein, et al., 1986, p. 457). To Klein, the RPD model is actually "a blend of intuition and analysis", where the intuitive side is represented by the pattern matching and the analytical part is represented by the mental simulation (Klein, 2008).

Now called "strategic intuition" (Duggan, 2005, p. vi), intuition-in its Recognition Primed Decision-Making variant, is now officially recognised as a valid decision making tactic by the US Army, US Marine Corps and Swedish Army (US Marine Corps, 1997; Duggan, 2005; Anders Ericsson, 2006, p. 412; DeFoor, 2007), either on its own or combined with analysis (United States Army, 2010, p. 5.29), depending on the circumstances.

If medicine (Quirk, 2006), nursing (McCutcheon & Pincombe, 2001; Cader, et al., 2005; Lyneham, et al., 2008) and the law (Glöckner & Engel, 2008; Engel, 2008-2009; Vernier, 2007) are added, intuition is seen as a valuable process in fields where decision-making is critical.

Such an official acceptance challenges conventional wisdom in the dominant negotiation research paradigm.

Section 6 The Social Judgment Theory perspective

The cognitive modes of negotiators can be further explored through another lens: Hammond's Social Judgment Theory (hereafter "SJT"). Based on the insights of Egon Brunswik and Kenneth Hammond, it is defined as "a cognitive theory of the mental process by which individuals collect and evaluate information in order to reach a judgment. [...] When information is certain and when there is a known formula for organizing and applying it, judgment becomes analytical thought, and the cognitive process is relatively apparent. [...] However, as the nature of the problem becomes more complex-as the number of factors to be considered grows, as information becomes less certain and doubt about the outcome of the judgment increases, and when the individual has no formula or rules for reaching the judgment-the judgment process becomes increasingly obscure, difficult for the individual to describe, and very difficult for others to infer. At the extreme end of this process, judgments are intuitive; that is, based on a vague sense of "experience" and not on a conscious evaluation of information. But in general, judgment is "quasi-rational"; it incorporates elements of both intuition and analytical thought" (Hammond and Grassia, 1985,p.235). It is argued here that their insights and empirical findings offer a balanced and solidly grounded understanding of cognitive processes. In particular, the SJT focus on ambiguity and uncertainty, which are key task environment for negotiators. Moreover, the definitions of intuition and analysis proposed under the SJT in this section are adopted throughout this piece.

This section first reviews the origins of Hammond's approach in Brunswik's ideas and experiments, and elaborates on Hammond's approach on the cognitive modes, on cognitive strategies, on dynamic cognition and the importance of tasks and environment. It ends with an assessment of such an approach as an efficient tool to better understand the cognitive modes used by negotiators.

1. Brunswik's insights.

The originator of the SJT, Kenneth Hammond, has been deeply influenced by the work of Austrian psychologist Egon Brunswik. Brunswik offered a new methodology in psychology ("representative design"), took uncertainty as a key environmental feature, extended understanding of rational cognition, and offered a new approach for perceptual and social decisions and judgments.

1.1. Importance of the environment- Certainty and uncertainty in tasks

Rappoport and Summers noted that for Brunswik, human beings should be "understood as functioning in an uncertain, probabilistic environment" (Rappoport & Summers, 1973, p. 2). Indeed, in Brunswik's terms, the organism had to "come to terms" with its environment (Tolman & Brunswik 1935:43; Brunswik, 1957, p. 5). The "causal texture of the environment" is a key element in Brunswik's insights. There is a causal texture in the environment because the latter is ambiguous (Tolman & Brunswik, 1935, p. 44; Hammond, 1966, p. 29). In Brunswik's approach, uncertainty is assumed to be "a characteristic of *both* the environment and the organism" (Hammond & Doyle, 1997, p. 64) (my emphasis). As Tolman and Brunswik put it as early as 1935, "[e]ach of us has come to envisage psychology as primarily concerned with the methods of response of the organism to two characteristic features of the environment. The first of these features lies in the fact that the environment is a causal texture [...] in which different events are regularly dependent upon each other.[...] The second feature of the environment to which the organism also adjusts is the fact that such causal connections are probably always to some degree equivocal" (Tolman & Brunswik, 1935, pp. 43-44). Such aspects will be developed below. Let us note here the critical importance of the environment for the organism.

Such a perspective considered that the relationship between the environment and the organism was key for adaptive success (Brunswik, 1956; Hammond, 1966, p. 507; Hammond & Doyle, 1997, p. 64). More than that, to Brunswik, research in psychology was to focus on the environment's "causal ambiguity" (Tolman & Brunswik, 1935; Brunswik, 1943).

1.2. Rationality extended

To Brunswik, rationality was not limited to logical consistency but had to be extended to "perception" (intuition), which he considered as a form of thinking and therefore called it

"ratiomorphic" (Brunswik, 1956, p. 143). Brunswik thus considered "perception" (intuition) and "reasoning" (analysis), as the two sides of the same coin (rationality). This is in stark contrast with the conventional approach in negotiation.

It is argued here that this element is key in understanding the cognitive processes of negotiators: the latter face not only "rational" tasks (such as calculating a negotiation price, drafting negotiation arguments etc) but also "perceptual" tasks, such as assessing whether an attitude or statement is genuine, or assessing the value of an offer, particularly a qualitative one (for instance in politics), which cannot be resolved by pure analysis alone.

1.3. Perceptual and social judgments and the use of multiple fallible indicators.

To investigate and represent perceptual and social judgments, Brunswik used an optical model called "the lens model". It is premised on the idea whereby "higher organisms receive information from the environment in the form of multiple fallible indicators (or "cues") of some unobservable state of the environment" (Brunswik, 1966 [1954], p. 488; Brehmer, 1984, p. 385; Hammond, 2007, p. 42). To quote Hammond, "[t]he lens model thus represents an uncertain world represented by many fallible indicators and an organism that has the capacity to integrate them -without awareness- into a judgment that displays remarkable accuracy in visual perception and various degrees of accuracy in other circumstances" (Hammond, 1996, p. 87). Indeed, since the environment does not give clear-cut information, it must be recombined by the organism in an imperfect way. This model shows pictorially the different indicators or cues and their use to make a perceptual judgment.

Figure 1 The Lens Model

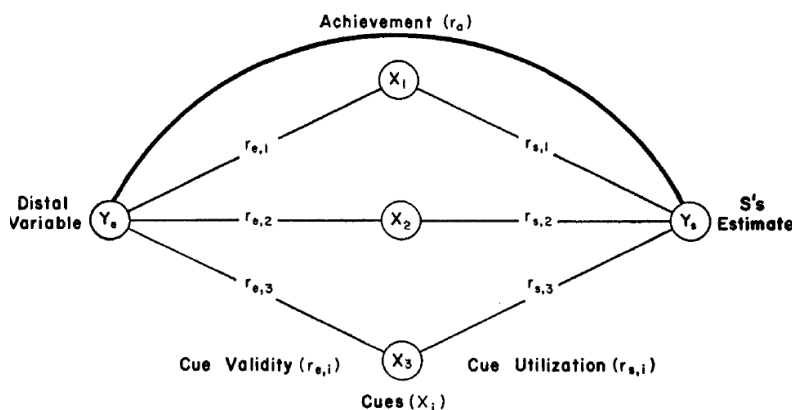


FIG. 2. Brunswik's lens model.

Source: Hammond, et al., 1966, p. 224

Cues, signs, signals or indicators can be defined as “provid[ing] uncertain information about something else, point[ing] to something beyond the indicators themselves” (Hammond, 2007, p. 32). This means that each “cue” or “indicator” (for instance, clinical symptoms or economic indicators or non-verbal signals in negotiations) give information about the invisible state of objects and events (for instance, respectively, health, the state of the economy or the mood of a negotiator) (Hammond, 2007, p. 32). These indicators are “multiple”, in the sense of being redundant or competing, that is, the same information is provided by several indicators (Brehmer, 1984, p. 385; Hammond, 2007, p. 36). They are also “fallible”, in the sense that “two or more unobservable features of an environment (particularly social ones) may give rise to the same observable event (Hammond, 2007, p. 41). Hammond also noted that “in [our social world] we remain dependent on multiple fallible indicators and irreducible uncertainty induces intuitive cognition” (Hammond, 1996, p. 186). Since negotiators work in such a social world, full of uncertainty, it is argued here that this insight may be highly relevant for them.

Brunswik’s key concepts have influenced research on judgment and decision processes (Juslin & Montgomery, 1999), including clinical decision making (Hammond, 1964), thinking (Gigerenzer, 2002), interpersonal conflicts (Hammond & Brehmer, 1974), interpersonal learning (Hammond, 1966), perception (Postman, 1963), social perception (Crow & Hammond, 1957; Albright & Malloy, 2001; Blanch-Hartigan, et al., 2012), judgment analysis (Cooksey, 1996; Holzworth, 2001) but also the understanding of the effects of psychiatric drugs on social judgment (Gillis, 2001), in research on human factors (Kirlik, 2006), evaluation of professional performance (Hogge, 2001), organizational justice (German, 2011), lie detection (Hartvig & Bond, 2011), information sampling (Fiedler & Juslin, 2005), to the study of trust (Morita & Burns, 2014 [2012]), to name but a few.

2. Representative design.

Brunswik offered a scathing methodological critique of what is called “systematic design” (Brunswik, 1956). The later, which is dominant methodological approach in experimental psychology, keep all variables constant but one (Brunswik, 1949; Hammond, 1996; Hammond & Stewart, 2001). In particular, Hammond gave an intriguing ad absurdum illustration of the false generalisations of systematic research. In an experiment on “the

development of learning in the Rhesus monkey", Harlow concluded that "[t]all, unstable stimuli ...elicit avoidant, hesitant behavior" (Harlow, 1959, quoted in Hammond, 1966). Hammond noted wryly: "Won't readers be surprised when they encounter monkeys living in tall, unstable trees, and exhibiting anything but "avoidant, hesitant behavior?" (Hammond & Stewart, 2001, p. 7). Hammond crisply defined the flaw of the cognitive bias approach: "errors" such as those described [in systematic design experiments] are errors only because they are *made* to be errors by the nature of the experimental environment and by the nature of the learning task. Suppression of such error factors can be defined as learning only when the task presented requires that the animal suppress completely those responses carefully arranged by the experimenter to be "errors". *If* the environment did indeed provide only those situations in which the monkey must learn to suppress all response tendencies but one, then, and only then, would these experiments be of more than passing interest, for only then would they provide something more than the results of a special and strange case" (Hammond, 1966, p. 59; italics in the original). Therefore, if the situation is lab-like, for the sake of internal validity, many of the elements of a real negotiation (including context, emotions etc.etc.) are missed, even if dozens or hundreds of subjects are used (Brunswik, 1955). As a consequence, Brunswik convincingly argued that the results of such experiments may not be generalized beyond the experiment.

The use of systematic design explains cognitive psychology's taste for so-called cognitive errors. However, when representative design was used, many would be "cognitive errors" disappear (Juslin, 2001; Hammond & Stewart, 2001, p. 6). For instance, Brunswik showed, in his 1944 landmark experiment, that his single subject who had to give an intuitive estimate of object size, visual angle and distance in situations of her daily environment showed an excellent capacity to do so (Brunswik, 1944). Much later, Juslin, for instance, demonstrated that the "overconfidence bias" disappear when the items of the experiment were selected from the environment of the subject (Juslin, 1994). Moreover, Gigerenzer listed twelve would-be "cognitive illusions" which were later relabeled by experiments using representative design as adequate judgments given the environmental structure (Gigerenzer, 2004).

In contrast, representative design is about "designing experiments in a manner that permits generalization-extension of results from the (simulation) laboratory to the situation of interest" (Hammond, 1996, p. 225). As a consequence, experiments should be about

situations/tasks/environments which are representative, in all their complexity of the conditions subjects encounter when they “come to terms” with their environment (Tolman & Brunswik, 1935). To quote Brunswik, “situation or tasks should be selected in such way that the resulting sample is representative of the actual demands of the whole environment made upon the organism with respect to the actual stimulus variable under consideration” (Brunswik, 1944, p. 2). It aims at “the fidelity (accurate representation) of the laboratory simulation of the actual circumstances of interest rather than the control of all variables other than a single independent variable” (Hammond, 1996, p. 226).

In contrast, the proponents of intuition as a cognitive bias, Kahneman and Tversky, used systematic design for their experiments. Moreover, they used statistic reasoning, which does require education/training. Kahneman and Tversky may therefore have tested another construct, “raw cognition”, rather than intuition (Hammond, 1996).

As a consequence, since the dominant negotiation research paradigm is exclusively based on experiments under systematic design and used tasks which required domain knowledge (not available through mere intuition), serious doubts can be cast upon the *generalisability* of their results. Moreover, the dominant negotiation research paradigm did not consider representative tasks requiring non analytical cognitive processes.

3. Cognitive processes in the "Social Judgment Theory".

Hammond extended Brunswik's insights to clinical judgments (Hammond, 1954). Moreover, and importantly, Hammond, Brehmer and others extended them to social judgments (Brunswik, 1956; Hammond, 1966; Hammond & Doyle, 1997). The latter are defined as “judgments we make of the personalities of ourselves and others” (Funder, 1987, p. 75). This led to the creation of “Social Judgment Theory”. Developed by Hammond and colleagues (Hammond, Stewart etc), SJT is, to quote Hammond, “based on the proposition that, in social life, conclusions must be drawn with regard to cognitive tasks that are not wholly susceptible to analytical processes” (Hammond, 1975, p. 70). SJT emphasises the role of intuition in conditions of uncertainty, complexity and ambiguity, and thereby directly challenges the dominant negotiation paradigm.

In practice, this means that judgment will be analytical “[w]hen information is certain and when there is a known formula for organizing and applying it” (Hammond & Grassia,

either an "unconscious process of integrating of information [...] that come from multiple fallible indicators" (Hammond, 2000, p. 78; Hammond, 2007, p. 148), or through the use of "emotion/symbols or relationships between abstract ideas (Hammond, 2007, p. 180) or else "pictorial expression/representation (gestalt/completeness)" (Hammond, 2007, p. 84). In that respect, pattern recognition, which is about using prior learning and experience, can be considered an intuitive cognitive process (Cooksey, 1996, p. 22). Hammond grew increasingly critical of the very term of "intuition" which he found "useless" (Hammond, 2010). To him, in addition to his view that the term was being debased in the literature, he warned of the lack of cognitive control associated with such a cognitive process: "one surrenders to intuition [...] you have it (or perhaps it has you)" (Hammond, 2010, p. 329). The third cognitive mode, "quasirationality", a concept which does not exist in the other perspectives, is said to represent "all the combinations of intuition and analysis that cognition may employ" (Hammond & Grassia, 1985, p. 235; Hammond, 1996, p. 150). It is similar to rationality in the sense that its outcome can be justified, but only partly (like intuition). Hammond used "quasi" to emphasize the fact that "the process fails to achieve logical perfection due to an absence of current knowledge, or skill, in organizing the knowledge it is based on, or because the person is simply forced to rely on unreliable, partially valid information (for instance cues), as is normally the case, or refuses to make the effort required for analytical cognition" (Hammond, 2010, pp. 330-331). This concept is similar to the blend of intuition and analysis which Sadler-Smith pointed to but which he did not really elaborate on (Sadler-Smith, 2010). Brehmer added that quasirationality is "partially rule-bound (analytical thinking) and partly relying on specific experience (intuitive thinking)" (Brehmer, 1986, p. 303). It is a "cognitive compromise between the mysteries of intuitive judgments and the strict adherence to analysis" (Hammond, 1996, p. 175). It is very important to note that, to Brunswik and Hammond, the flexibility of quasi-rationality (a construct with which he tended to replace "intuition" in his later work) is "a positive (adaptive) feature of cognitive activity" (Hammond, 2010, p. 330). Indeed, Hammond insisted that this quasirationality was not "merely flawed rationality or rationality poorly carried out" (Hammond, 2010, p. 330). In fact, whereas Björkman considered that the intuitive mode was the normal cognitive activity (Björkman, 1984, p. 419), Hammond and Grassia considered that judgment usually employed the quasirational mode (Hammond & Grassia, 1985, p. 235; Hammond, 2010, p. 330). In such a perspective, experience is intimately linked to quasirationality. Indeed, to Hammond and Brehmer, past experiences act as a filter which verifies, changes, transforms and

sometimes distorts conclusions reached by explicit rules, and in some cases, some steps of the thinking process can be replaced by experience (Hammond & Brehmer, 1974, p. 340). Experience can therefore represent the intuitive side of this cognitive mode. Last but not least, Hammond also suggested that quasirational or intuitive judgments, unlike analytical ones, often needed an intersubjective validation, that is, a comparison of one's quasirational or intuitive-led judgment with that of other people using the same cognitive tactic (Hammond 2000, p.141). Such an intersubjective validation could therefore be considered as an indicator of weaker cognitive modes, and will be used that way in the data analysis.

The chart below summarizes the differences between analysis and intuition. This comparison points to a number of issues already mentioned by other theories, for instance the respective processing speed and mode. It however adds some new elements, such as the organizing principle, consistency and accuracy of judgment. Moreover, even though they are presented visually in this chart as dichotomous, it is important to keep in mind that intuition and analysis are considered as the endpoints, or poles, of a cognitive *continuum*. Quasirationality is in-between in terms of features.

Chart 2 Differences between analysis and intuition

feature	Intuition	analysis
Processing speed	fast	slow
Processing mode	Unconscious	Conscious
Organizing principle	Averaging	Complex principles
Cognitive effort	low	high
Justifiability of the outcome	low	high
Consistency	Low	High
Accuracy	Moderate, yet seldom produces large errors	High, yet produces large errors

Sources: Peters, et al., 1974; Hamm, 1988, p. 81; Hammond, 1996

Hammond noted that there were several obstacles to the full use of the two extremes of the cognitive continuum.

Full analytical cognition could be blocked because:

- of the impossibility to justify, on the basis of analysis, the use of a single specific model, that is, people lacking the time, skills, processes or tools “to explore fully the entire problem space and thus acquire the data that fully rational optimization would require” (Hammond, 1996, pp. 155-156);
- of the availability or partial availability of a model but with “a poor data-model fit”,
- of the presence of “personal-social environment models”, or of “unstructured or ill structured environments” (Hammond, 1996, pp. 155-156);
- it requires education or training not only to be aware of it but also to use it properly (Hammond, 1996, p. 157).

Many of the elements mentioned here represent the environment in which negotiators have to perform.

Hammond noted that, unlike analytical cognitive processes, intuition is always available cognitively speaking and can specifically be used when it is not easy or it is impossible to use analytical models (Hammond, 1996, p. 157). Interestingly, Hammond also noted that the use of intuition could be hampered by an organizational obstacle: the level of power of the decision-maker: “those lower in the organizational hierarchy must show greater cognitive responsibility than those higher up. [They] cannot defend decisions by saying “that was my gut reaction” and expect to get away with it, but those at the top can; indeed it is precisely because they are supposed to possess good “gut reactions” that those at the top are given top positions ” (Hammond, 1996, p. 157). This important aspect will be discussed further in the findings chapter.

3.2. Cognitive strategies.

Hammond suggested that analysis, quasirationality and intuition were cognitive tactics serving two *cognitive strategies* (Hammond, 2007, p. 124): coherence and correspondence.

It is argued in this research that such a distinction may have important consequences on the understanding of cognitive processes of negotiators. Indeed, coherence is usually assimilated with rationality, whereas correspondence is linked to perception, and the two competences are critical for negotiators, as it is further developed below. It is also suggested here that the concept of cognitive strategies offers a very useful heuristic templates to understand the cognitive processes of respondents, by giving information on the cognitive objective that the intuitive, analytical and quasirational tactics try to serve.

3.2.1 Coherence and correspondence as cognitive strategies

Hammond argued that there were two broad cognitive strategies (Hammond, 1996, pp. 95-110; Hammond, 2007, pp. xvi-xvii), defined as "an overall plan related to a cognitive goal" (Hammond, 2007, p. 29): the correspondence and the coherence strategies.

The *coherence strategy* "evaluates the consistency of the elements of a person's judgment" (Hammond, 1996, p. 106). This strategy compares ideas with ideas (Hammond 1996; Hammond 2007). It is usually called "Rationality" and is the "most prominent coping method" (Hammond, 2007, p. xii). In contrast, the *correspondence strategy* is about "using information for the purpose of making empirically accurate judgments about the natural world" (Hammond, 2007, p. 29). Such a strategy compares ideas with facts (Hammond 1996; Hammond 2007). Hammond also argued that these cognitive strategies are mutually exclusive, and that people "alternate" between coherence and correspondence strategies (Hammond, 2000, p. 226). Alternation means that coherence and correspondence are "complementary rather than contradictory", in spite of their opposing conclusions (Hammond, 1996, p. 203; 212).

3.2.2. Coherence and correspondence as cognitive competences

In addition to being cognitive strategies, Hammond considered correspondence and coherence as **cognitive competences**, making up the two standards for evaluating a judgment: empirical accuracy (correspondence competence) and logical consistency (coherence competence) (Hammond, 2007, p. xvi).

Hammond argued that **coherence competence** is innate, but only to the extent that we have a potential to achieve it (Hammond, 2007, p. 31). This means that we all have the potential for coherence but that its actual implementation depends on our (unequal) personal abilities *and on the education we receive* (Hammond 2007:31). This also means that coherence competence needs to be educated. This is the reason why, according to Hammond, many cognitive psychology experiments, which used tasks requiring prior learning (for instance, statistical calculus, or for that matter, negotiation concepts, which cannot be known intuitively) led to "cognitive biases". It is contended here that this may have been the same with negotiation research, with experiments revolving around concepts originating from research and which could not be intuitively known (for instance the so-called "fixed pie bias").

While the coherence competence is well known, as it represents the common understanding of logics and rationality, the **correspondence competence** has highly practical and critical applications, from assessing the distance and height of an obstacle, to making a clinician diagnosis, to assessing the enemy's likely place of attack (Mosier, 2009, p. 154), or assessing the truthfulness of a statement. In particular, making social judgments, defined as “making correct judgments about events in a social group so that one’s social behavior is guided accordingly”, uses a correspondence strategy (Hammond 2007:85). Such a competence is critical when negotiators make social judgments or make a diagnostic of the situation.

To Hammond, correspondence competence “comes “naturally” to us, [being] exercised instantaneously without thinking, without making strong demands on memory” (Hammond, 2007, p. 34), and is therefore regarded as innate, as part of our genetic inheritance (Hammond, 2007, p. 36). As a consequence, correspondence competence, at least as far as our perceptual judgments are concerned, does not normally require education or training.

Brunswik demonstrated that correspondence judgments “frequently and accurately correspond[ed] to the objects in the natural world over a wide range of conditions” (Hammond, 2007, pp. 34-36). Hammond also noted that correspondence research “found competence to be largely determined by task conditions” (Hammond, 1996, p. 109), with a “decreasing accuracy when the judgment moves from the perceptual to conceptual tasks and materials [...], people and events” (Hammond, 1996, p. 110). Hammond further suggested that “[c]orrespondence accuracy diminishes as uncertainty in the information environment increases or as the task system takes on coherence” (Hammond, 1996, p. 142). This critical relationship between the task and the cognitive mode is the focus of the next paragraph.

3.3. A theory of tasks/environment, particularly under uncertainty.

As indicated above, Brunswik attempted to change psychology's focus on the subject to “an analysis of the interaction between two systems, *the environment* and *the behaving subject*” (Hammond, 1966, p. 23)(italics in original). Brunswik insisted that “research should focus where behavior is focussed” (Brehmer, 1984, p. 390).

3.3.1. A theory of task

In line with Brunswik's insistence on the importance of the environment and of the adaptive nature of cognition, Hammond complemented his cognitive theory with a task property theory (the task continuum theory). Indeed, in Brunswikian psychology, researchers should grant the cognitive task as much attention as the cognitive process (Brehmer, 1984, p. 386). To quote Hammond, "[d]ifferent situations demand different forms of cognitive ability; some will call for increased analytical cognition, whereas some will call for increase reliance on intuition" (Hammond, 2000, p. 16). This means that "cognition covaries with task conditions" (Hammond, 2000, p. 102), that is, "[t]asks will vary in the amount of intuitive and analytical cognition they induce" (Hammond, 2007, p. 230).

Hammond and others used the term "induce" in order to emphasize the non deterministic relation between task properties and cognitive properties (Hammond, et al., 1984, p. 10). Indeed, Brunswik considered people as "enquiring scientists not as puppets dancing to the movement of environmental strings" (Wearing, 2001, p. 266). Importantly, since "the properties of the task will induce similar properties in the [decision-maker]'s cognitive activity" (Hammond, 2000, p. 102), it is therefore possible to predict the decision-maker's cognitive activity (Hammond, 2007, p. 102), including in what cases and why two people would disagree, for instance why two medical doctors would disagree on a diagnosis (Hammond, 2010), or why a negotiation failed when negotiators shared the same interests (Rappoport, 1965; Rappoport, 1969; Hammond, 1973, p. 189). The SJT has therefore a predictive nature: if "the properties of the task will induce similar properties in the judge's cognitive activity, we can predict the judge's cognitive activity" (Hammond, 2007, p. 125). This has potentially dramatic consequences for negotiation research, in that it can be used to investigate the cognitive mode induced by a task. It is also highly interesting for negotiators, who could use it as a tool to predict the other negotiator's cognitive mode.

3.3.1.1 Empirical findings on the relative utility of the different cognitive mode

Brunswik and Hammond were the first scholars to suggest that judgment problems (requiring non analytical cognitive modes) should not be solved by applying an analytical mode (Hammond & Stewart, 2001, p. 262).

Indeed, Brunswik demonstrated experimentally that analysis and intuition had no functional value per se, but that their utility depended *on their adaptation to the physical and*

social environment (Brunswik 1956 in Hammond 1966, p.507). In an experiment on size constancy perception, Brunswik demonstrated that the response of the subjects using perception (intuitive mode) fell "in a compact and fairly normal frequency distribution" (Brunswik, 1956, p. 91), that is, "a normal distribution of errors", whereas in the response of the subjects using "reasoning" (analysis), "almost half [...] [were] on-the-dot correct", but also produced "widely dispersed errors" (Hammond & Stewart, 2001, p. 260).

Moreover, he demonstrated that analytical thinking used hastily could be subject to gross errors, which could be even more serious than those induced by intuition (Hammond, 1966, p. 529), and which Brunswik characterised as "the going off in the wrong direction by being right about something else" (Brunswik, 1956, p. 91). Brunswik remarked that "[t]he entire pattern of the reasoning solutions resembles the switching of trains at a multiple junction, with each of the possible courses being well-organized and of machine—like precision yet leading to drastically different destinations only one of which is acceptable in light of the cognitive goal. This pattern is illustrative of the dangers inherent in explicit logical operations" (Brunswik, 1956, pp. 91-92). To quote Brunswik, analysis is "like the gift of Prometheus: highly potent and beneficial, or else disastrous without the benefit of adequate warning" (Brunswik, 1966 [1954], p. 490). Importantly for this research, to Brunswik, gross errors appeared "when certainty-gearred interaction lacks its necessary counterpart in the ecology" (Brunswik, 1966 [1954], p. 490), that is, when the cognitive mode does not fit that induced by the task.

To Brunswik, the difference between intuition and analysis was "merely one of degree" (Brunswik, 1937, p. 257). He therefore offered a more balanced view of cognition. To him, "the different varieties of thinking begin to reveal themselves as but different forms of imperfect reasoning, each with its own particular brand of virtues and of "stupidity", if the term be permitted", adding a key argument: "all intuition and all irrationality thus appear but as aspects of rationality" (Brunswik, 1966 [1954], p. 491).

In addition, in an older experiment using Brunswikian principles, Rappoport trained subjects were trained to be analytical or intuitive (Rappoport, 1965). The results showed that people who were trained to think analytically were more conflict-prone and less compromising than those people trained to think intuitively. This study pointed to **"the dangers of the application of a predetermined system of thought to a task system not**

fully understood” (Hammond, 1973, p. 200) (my emphasis). This important conclusion will be dealt with in the findings chapter.

This represents a significant (and very early) departure from mainstream psychology's tenets, and therefore from the current dominant paradigms in negotiation. Indeed, through Brunswik's insights, intuition would no longer be considered merely as an "irrational" cognitive process, but its value would depend on its match with the task, an issue developed in the next paragraph.

3.3.1.2. Empirical findings on the efficiency of the fit between the task and the cognitive mode.

In stark contrast with other perspectives, Hammond and others demonstrated that intuitive and quasirational cognitive modes could be often superior to analysis (Hammond, et al., 1983; Hammond, et al., 1984; Hammond & Doyle, 1997; Sadler-Smith & Sparrow, 2007, p. 56).

In a first experiment Peters, Hammond and Summers showed that decision-makers adapted to the task nature by “utilizing the appropriate mode of cognition” (Peters, et al., 1974, p. 130). This experiment also showed that the cognitive mode used by the subjects “need not considered as solely a matter of individual differences” (Peters, et al., 1974, p. 170). This means that the task’s influence is at least and possibly more important than supposed individual cognitive preferences.

Moreover, in an empirical study with expert highway engineers, Hammond and colleagues found that intuition and quasi rationality could not only be as effective as analysis, but also sometimes more effective (Hammond, et al., 1983, p. 47; Hammond, et al., 1984, p. 45). To quote the authors, “in practice, the efficacy of analytical cognition does not invariably surpass the efficacy of intuitive or quasi-rational cognition (Hammond, et al., 1984, p. 46). Hammond found such results counterintuitive: “the parallel conclusion regarding intuition defies common sense. For [it] argues that the operator who employs intuitive judgment in response to task information designed to evoke intuitive cognition will be more accurate in his/her judgments than one who is analytical in these circumstances. Not only does this conclusion defy common sense, but it runs counter to current research-based suppositions, all of which argue in favor of the application of analytical solutions in all circumstances”, quoting research by Kahneman, Slovic, & Tversky (Hammond, 1988, p. 8). Hammond concluded that

it was actually dangerous to apply "the rules of logic to judgment problems" (Hammond, 2010, p. 331). A good decision is therefore one where the cognitive mode is aligned with the task characteristics (Hamm, 1988, p. 85). Further experiments by Hamm (Hamm, 1988) and Dunwoody et al. claimed to have confirmed such findings (Dunwoody, et al., 1999; Dunwoody, et al., 2000).

On his part, Hamm showed that, whereas the analytical mode was more accurate, "the advantage of analysis would not necessarily be found with other kinds of task content" (Hamm, 1988, p. 86). Hamm also argued that "the ability of a task feature to induce a mode cognition depends also on what the thinker knows" (Hamm, 1988, p. 84).

Such results challenged significantly the conclusions of conventional wisdom in cognitive psychology (Hammond, 2007, pp. 29-30;36), which is the foundation of the dominant negotiation research paradigm.

3.3.1.3. Cognitive task continuum

Hammond suggested that "[c]ognitive tasks can be ordered on a continuum with regard to their capacity to induce intuition, quasirationality or analytical cognition (Hammond, 1996, p. 180). The cognitive activity will move along the continuum "as the situation demands" (Hammond, 2010, pp. 331-332).

It is important to note that, from a methodological viewpoint, in order to avoid circularity, Hammond considered it imperative to first "define the properties of each of these three types of judgments tasks independently of the judge's cognitive activity" (Hammond, 2007, p. 125). This is the reason why the methodological approach used in this piece distinguishes and defines the negotiation tasks in accordance with their a priori cognitive inducing features, that is, intuition-inducing, quasirationality-inducing and analysis-inducing tasks.

This led Hammond to describe the broad task features which induce the different cognitive modes (see chart below).

• **Chart 3 Intuition-inducing and analysis-inducing judgment tasks**

Task characteristic	Intuition-inducing state of task characteristics	analysis-inducing state of task characteristics
number of cues	Large (>5)	small
Measurement of cues	Perceptual measurement	Objective, reliable measurement
Distribution of cue values	Continuous, highly variable distribution	Unknown distribution; cues are dichotomous; values are discrete
Redundancy among cues	High redundancy	Low redundancy
Decomposition of task	Low	High
Degree of certainty of task	Low certainty	High certainty
Relation between cues and criterion	Linear	Nonlinear
Weighting of cues in environmental model	Equal	Unequal
Availability of organizing principle	Unavailable	Available
Display of cues	Simultaneous	Sequential
Time period	Brief	long

Sources: Hammond, 1988, p. 36; Hammond, 1996, p. 163

This chart suggests that the cognitive activity would be predictably impacted by the way information is represented. This means that such a representation "can be expected a priori to induce intuition, quasirationality or analysis" (Hammond, 1996, p. 183).

3.3.2. A theory of judgment under uncertainty

Based on Tolman's and Brunswik's appreciation of the importance of causal ambiguity, social judgment theory also contends that the environment is full of many ambiguous variables, some being relevant some being irrelevant, in full or in part. Subjects must therefore cope with such a causal ambiguity.

It is argued that there are here some clear parallels with the environment in which negotiators are. As noted above, negotiators are immersed in uncertainty, ambiguity and

complexity, not only as far as their social relations are concerned (the other negotiators) but also the issues they deal with, which in many cases, have no clear cut solutions (this is by the way the reason why such issues are negotiated instead of being decided upon).

Indeed, to Hammond, decision-makers face what he called "irreducible uncertainty", that is "uncertainty that cannot be reduced by any activity at the moment action is required (Hammond, 1996, p. 13), and which demands human judgment: "judgment is the cognitive process evoked by uncertainty" (Hammond, 2007, p. 15). Indeed, in spite of many attempts, in some circumstances, "[t]here is no algorithm, no purely analytical method for obtaining, organizing, and integrating the information required for forming a policy" (Hammond et al., 1977, p. 80). This means that uncertainty, which is key environmental factor for negotiators, may have an impact on cognitive modes, an issue which is going to be explored in the next paragraph.

3.3.3. Dynamic cognition.

Hammond's theory of cognition is also dynamic: it means that cognition may move from analysis to quasirationality to intuition and back and forth, depending on the circumstances: "[w]hen all analytically derived efforts fail, the subject's cognitive activity moves away from analysis to quasirationality; that is, the subject's cognitive activity begins to acquire elements of intuitive cognition. "Hunches" appear to guide behavior. (...) If the problem is so difficult that "hunches" refined by analysis fail to provide a solution, then the subject's cognitive activity will move far enough along the cognitive continuum to become predominantly intuitive; cognition may consist almost entirely of pictorial imagery [...] But if the problem-solver finds that intuition provides an idea to be tested and is therefore sufficient to move him or her to an analytical mode [...] the subject may be said to move, not necessarily continuously or smoothly, from analysis through quasirationality to intuition and then back again to analysis" (Hammond, 1996, p. 193)

In that respect, to Hammond, the crux of the matter is the concept of "constancy", that is, "maintain[ing] stable relations with their environment" (Hammond, 2000, p. 67). Conversely, Hammond considered that constancy's disruption would induce a "cognitive response that is intended to re-establish stability and thus survival" (Hammond, 2000, p. 69). Cognitive change means either moving cognition towards the intuitive or analytical poles, or in between, depending on the cognitive strategy and tasks conditions. To Hammond, "it is precisely those unexpected, often inexplicable, events that demand immediate decisions that

drive cognition away from analysis toward the intuitive pole of the cognitive continuum. Similarly, task circumstances that ordinarily require no more than quasi-rational cognition may change in a way that demand that more thought be given to them. If more time or more rule-use is demanded, then a move toward analytical cognition will be induced by these new task conditions (if time permits). Events that demand a move toward analytical cognition may be even more disruptive than those demanding a move toward intuition since intuition needs no model, no guidance- it does what it does- whereas analysis must always find a defensible solution [...] capable of being retraced" (Hammond, 2000, p.102). Such an approach is complementary to the theory of tasks conditions, and makes it then possible to offer "predictions of cognitive-task interaction under destabilization" (Hammond, 2000, p. 111).

This insight may have an important impact for negotiators. Indeed, dilemmas, unexpected events, and surprise moves are an intrinsic feature of negotiations (Susskind, 2004; Stuart Jr., 2004; Winship, 2004). Concretely, this means that disruptions may have an impact on the cognitive modes of negotiators, more often than not driving the negotiators' cognition towards the intuitive pole.

This means that the dominant paradigms' prescription to use analysis in all situations may somehow lose its pertinence, particularly when the task is not conducive to analysis. This also means that negotiators could predict their negotiation counterpart's and their own cognitive change and act accordingly.

3.3.4. The impact of politics and international affairs on cognitive modes.

As recalled above, negotiators in the EU work on political issues. In that respect, Hammond and Brehmer noted long ago that policy-making and international relations relied heavily on quasi-rational cognitive modes (Hammond & Brehmer, 1974, p. 341). They asserted that decisions in such an environment do not come from scientific laws, but are based on "experience and folklore" (Hammond & Brehmer, 1974, p. 340). They also pointed out that such "inductive inferences concerning world affairs are based on uncertain data: the relations between the data given and the circumstances to be inferred are not reliable; they are merely probabilistic" (Hammond & Brehmer, 1974, p. 340). In addition, this study noted the politician emphasized their own intuitive and creative qualities, whereas they assumed an analytical approach to their counterparts (Hammond & Brehmer, 1974, pp. 342-343).

Moreover, it is suggested that this quasirational tactic serves a coherence strategy, because there are no or only partial empirical criterion upon which a judgment can be based:

without such a criterion, only a search of consistency of the argument remains available (Hammond, 2007, p. 177; 180).

Hammond contended that quasirationality can also move to intuition when there are “strong appeals to our emotions by focusing on such concepts as freedom, liberty, strength, our shores, our heritage, and the like” (Hammond, 2007, pp. 177 & 180). Such intuitive appeals to grand principles are often used in negotiations, as it will be seen in the data analysis. Last but not least, and of particular importance for political negotiators, Hammond points out that “judgments of historical and political material will be justified [...] more often by coherence with the supporting ideology” (Hammond, 2010, p. 327).

Conclusions

The social judgment theory perspective offers many useful insights:

- along with the management perspective but against the cognitive psychology and mainstream judgment and decision-making perspectives, it suggests that human judgment uses (descriptively) and needs using (prescriptively) all cognitive modes (analysis and intuition), where appropriate;
- unlike the mainstream judgment and decision-making perspective, along with naturalistic decision-making, and further than the management perspective, it considers that judgment is a “joint function of task properties and cognitive properties” (Hammond, 2000, p.83), that is, the study of the environment (the tasks) was key in the study of cognitive processes; here, the value of the cognitive mode is no longer intrinsic but linked to its match with the task; moreover, in such a theory of tasks/environment, uncertainty is a central element;
- unlike other perspectives, it suggests that cognitive modes should not be considered as a dichotomy but as a continuum, thereby introducing the key in-between concept of quasirationality;
- unlike other perspectives, it suggested putting together rationality and perception in a single theoretical home to better understand human cognition.

Hammond’s Social Judgment Theory and related concepts (such as cognitive continuum theory, correspondence and coherence competence etc) have been used in research on, among others, decision-making in aviation (Jacobson & Mosier, 2004; Mosier, 2009),

policy formation (Adelman, et al., 1975; Hammond, 1996), labour-management relations (Balke, et al., 1973), entrepreneurial decision-making (Gustafsson, 2006), clinical decision-making (Hamm, 1988), nursing decision making (Harbison, 2001; Cader, et al., 2005; Standing, 2008), interpersonal conflict (Dhami & Olsson, 2008), audit judgment and decision-making (Keen, 1999; Keen, 2011), or expert judgment and disagreement (Mumpower & Stewart, 1996).

Section 7 Research questions

A short stock-taking exercise may be useful at this stage.

The mainstream theories on Judgment and Decision-making, which negotiation research drew heavily from, have shown strong limitations in understanding negotiators' cognitive modes, and their use of intuitive decision-making in particular. To these theories, the latter is a cognitive flaw, inferior to analytical modes, which are also described as susceptible to cognitive illusions. This is leading to severe attacks on rationality or at least demonstrations of its reputed failure as descriptive and prescriptive of judgment and decision-making reality (Hammond, 2007, p. xiv).

In stark contrast, research in management, in naturalistic decision-making as well as in expert performance argued that non analytical cognitive mode ought to be acknowledged as valid and even as the hallmark of expertise (Agor, 1986; Dreyfus, et al., 1986; Klein, 2011). Moreover, the management literature pointed to two key aspects: the innate cognitive aspects and the influence of tasks, yet without giving much more details on either.

At this stage, researchers on negotiation and negotiators alike can be perplexed. On the one hand anecdotal evidence as well as some academic assumptions point to the use of intuitive cognitive processes by negotiators: to quote leading negotiation scholars Tsai and Bazerman, “[m]any negotiators trust their intuition” (Tsai & Bazerman, 2009, p. 14). As recalled earlier, intuition is indeed a cognitive process which is well known by negotiators, particularly by seasoned ones (Thompson, 2009), including diplomats (Bacchus, 1977; Thuysbaert, 2006).

On the other hand, negotiation researchers and practitioners face a dilemma: the dominant paradigm in negotiation research prescribes not to use their intuition and to rely solely on analytical processes, whereas research in management and in the naturalistic decision-making perspective says, if not the contrary, at least considers intuition as a key cognitive process.

Moreover, all the above perspectives have been based on generic decision-making tasks. It could be argued that the study of intuition has been based principally on tasks and perspectives which are only remotely linked to negotiations, and which were applied by

analogy to the latter (Tieleman & Buelens, 2013, p. 83). Last but not least, to quote Tieleman and Buelens again, " [t]he role of intuition in negotiations is still unexplored territory [and] [v]ery few scientific studies have been carried out in this area" (Tieleman & Buelens, 2013, p. 83).

However, the Brunswikian approach showed that cognitive processes should fit the tasks to be successful, that is, intuitive or analytical cognitive processes are not good or bad per se but depend on their match with the task at hand. Moreover, it suggested two essential principles to evaluate cognitive processes' success or failure. First, cognitive processes should be researched "in context to provide basis data on achievement"; second, the cognitive task should receive as much attention as the cognitive process itself (Brehmer, 1984, p. 389).

This suggests that research should use of Brunswik's key principle whereby it "should focus on where behavior is focussed" (Brunswik, 1963, p.231). This means that, before being able to assert that intuition or analysis are prescriptively adequate, research should first carry out a "survey" of the behaviours of people in their daily environment, as a means to "provide rich sources of hypotheses" (Brehmer, 1984, p. 390). Research should therefore explore tasks and classify them, which Brunswikian psychologist Brehmer called "one of the most urgent problems for psychology" (Brehmer, 1984, p. 392), and which remains valid to date.

In practice, this suggests that, before evaluating the success or failure of specific cognitive processes in negotiation, research should first explore them in context and classify them in accordance with the process they induce, which, it is claimed, has never been carried out before.

It is therefore suggested to investigate empirically, through the Brunswikian approach, as furthered by Hammond, the following questions:

1° What are the cognitive processes experienced by negotiators, particularly under uncertainty?

2° What are the negotiation tasks inducing non analytical cognitive processes?

Chapter 3 Research design and methodology

In the literature review, it was argued that negotiation research, upon which negotiation training is based, did not adequately deal with the cognitive processes of negotiators. In particular, it argued that it did not properly consider their use of intuition and quasirational cognitive processes (which contain variable levels of analysis and intuition) in negotiations, and even dismissed them as inappropriate cognitive tactics.

Using Brunswik's theoretical framework and Hammond's further developments, it was proposed that the conventional approach of negotiation research unjustifiably played down the experience of negotiators as well as the features of the environment which can induce, though not determine, the type of cognitive processes to be used. This theory, the conclusions of which were sustained by experiments by Hammond and colleagues, also emphasized that a match between the environment/task and the cognitive process would produce better results and in particular, that non analytical cognitive processes could be shown to be more effective than analytical ones in certain task environments.

It was also mentioned that the criticism of non analytical cognitive processes in negotiation was not based on empirical data relating specifically to negotiation but mostly from cognitive psychology, whose insights have been criticized sharply by Hammond and colleagues (see literature review), and from anecdotal evidence from the negotiation researchers' personal experience.

It was concluded that there was a need to investigate the experience of the different cognitive processes and tactics used by negotiators, as a preliminary to a new and more comprehensive theory of negotiation to feed negotiation training.

In this methodological chapter, it is argued that a new approach is needed. This will support the proposed qualitative methodological approach.

A first section will discuss the qualitative and naturalistic research design as well as the analytical framework, both being based on insights from the Brunswikian and SJT perspectives. In a second section, explication interviewing, the methodology to collect the data, will be described in details. The limits of this research will be developed in a third section, while the final section will deal with the ethical issues.

Section 1 Research design: a qualitative and naturalistic approach

1. Some epistemological challenges in negotiation research

It is argued that laboratory-based negotiation research experiments have been flawed by the lack of representativeness of the tasks presented to subjects.

Indeed, among the few negotiation researchers who investigated this issue, Gordon et al. noted the lack of internal and external validity of negotiation research (Gordon, et al., 1984). They noted in particular the limitations of the latter's "generalizability to real world settings" (Gordon, et al., 1984, p. 219; 223). Here negotiation research is facing the same conundrum as other fields of social research, in the sense that several authors have challenged and documented "the failures of laboratory-based behavioral research to generalize to real world situations [...] or [their] lack of "mundane realism" [...] [or their] "logical failings" " (Gordon, et al., 1984, p. 224). Indeed, the experiments upon which negotiation prescriptions are based often lack representativeness, that is, their objects lack representativeness. Moreover, Buelens et al., in very large review of peer-reviewed negotiation articles published between 1965 and 2004, noted that laboratory experiments accounted for 65, 5% of the research strategies for the 1965-1994 period and still 48, 8% of the subsequent period. They noted that laboratory experiments were mostly carried out on buyers/sellers negotiations and salary and job negotiations (Buelens, et al., 2008, p. 329).

Moreover, even though they also pointed out that "[t]he widespread use of laboratory experiments in negotiation research foster[ed] internal validity" (Buelens, et al., 2008), such an assertion has been seriously challenged by Brunswikian inspired representative design methodology. Indeed, as noted in the literature review, Brunswik and Hammond offered a scathing critique of what they called "systematic design". The latter, which is dominant methodological approach in experimental psychology, is the dominant variable research design where all variables are constant but one (Brunswik, 1949; Hammond, 1996; Hammond & Stewart, 2001). The situation would remain the same even if dozens or hundreds of subjects are used. It entails that the results of such experiments may not be generalized beyond the experiment. In contrast, representative design is about "designing experiments in a manner that permits generalization-extension of results from the (simulation) laboratory to the situation of interest" (Hammond, 1996, p. 225). To quote Brunswik, "situation or tasks should be selected in such way that the resulting sample is representative of the actual demands of

the whole environment made upon the organism with respect to the actual stimulus variable under consideration” (Brunswik, 1944, p. 2).

Since systematic design is the dominant approach in the most influential domain on negotiation research (cognitive psychology), and since most of negotiation research has been carried out on non negotiators, it is not unreasonable to question the validity of its results and of its prescriptions.

In response, another methodological approach was used in this study, employing real negotiators as subjects, and representative negotiation tasks, in order to be able to have a more representative description of their task environment.

2. A qualitative approach.

2.1. General observations

It is argued that, since its objective is aimed at a better understanding of negotiators' cognitive processes as they experience them in negotiations, a qualitative approach, as set out in detail below, is therefore justified.

According to Shank, qualitative research is "a form of systematic empirical inquiry into meaning” (Shank, 2002, p. 5). Moreover, to Denzin and Lincoln, qualitative research involves an *interpretive and naturalistic* approach: “This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them” (Denzin & Lincoln, 2000, p. 3). Krefting also pointed out that a phenomenological approach's goal is to "describe accurately the experience of the phenomenon under study, not to generalize to theories of models" (Krefting, 1991, p. 215). Moreover, Ospina summarised the advantages of such an approach in the following way:

- "flexibility to follow unexpected ideas during research and explore processes effectively;
- sensitivity to contextual factors;
- ability to study symbolic dimensions and social meaning;
- increased opportunities:
 - * to develop empirically supported new ideas and theories;
 - * for in-depth and longitudinal explorations of leadership phenomena; and
 - * for more relevance and interest for practitioners" (Ospina, 2004, p.2)

2.2. *The need for a different methodological perspective in the study of negotiation, and of negotiators' cognition in particular.*

It is also argued that a better descriptive theory of negotiation, based on how negotiators actually negotiate, as opposed to how they must negotiate (normative approach, mostly based on game-theoretical approaches), or to how they should negotiate (prescriptive approach, often with little empirical basis), is needed. The *naturalistic* feature of qualitative research is therefore important in this project. Naturalistic decision-making aims to study decision-making processes in real-world settings, thereby avoiding the somewhat “sterilisation” of laboratory experiments (Lipshitz & Shulimovitz, 2007; Klein, et al., 1986, p. 456). To deal with such naturalistic contexts, this new paradigm developed the “recognition-primed decision (RPD) model”, which Klein et al. defined as “describ[ing] how people use their experience in the form of a repertoire of patterns [...] explain[ing] how people can make good decisions without comparing options” (Klein, et al., 1986, p. 457). In addition, as recalled earlier, Brunswikian inspired research such as the SJT, advocated for a representative design, that is, employing “situation or tasks should be selected in such way that the resulting sample is representative of the actual demands of the whole environment made upon the organism with respect to the actual stimulus variable under consideration” (Brunswik, 1944, p. 2).

Negotiation scholar Alain Lempereur called for an opening of negotiation theories to “some *methodological otherness*” (Lempereur, 2012, p. 11) (*italics in the original*). To quote him, “[a]t the beginning, it may require for some of us to go beyond “science in labs,” and to break disciplinary walls. It may also help us to espouse a truly inter- and multidisciplinary approach. This change in methodological behaviors can make negotiation theories even more comprehensive and subtle, so to understand better some theoretical contradictions or complementarities that are either internal (between theories) or external” (Lempereur, 2012, p. 11). Moreover, in the context of the study of intuitive cognitive processes, Akinci also recommended the use of “alternative epistemologies” (such as phenomenology, retrospective and/or in vivo accounts, diary methods, interview, and self reports) (Akinci & Sadler-Smith, 2011, pp. 15 & 55).

As a consequence, a qualitative approach based on actual negotiation tasks was used in this study. Moreover, there are comparatively few qualitative studies of negotiators (Buelens, et al., 2008). In particular, to our knowledge, it was difficult, if not impossible, to

find examples of qualitative studies of cognition of negotiators, and particularly of their use of intuition: aside from the fact that intuition is almost systematically and very summarily described in the negotiation literature as a faulty cognitive mode, very little is known about this cognitive mode in negotiation settings.

Last, the framework offered by case study research was considered useful here. Indeed, Thomas included theory testing as one of the possible aims of qualitative research by the case method (Thomas, 2011, pp. 94-95; 111-115). He noted that "the assumption here is that there is already some sort of explanatory framework available for the phenomenon or situation on which you are focusing. Your case study, then, is being undertaken to test this explanatory framework, this "theory"" (Thomas, 2011, p. 115). In this study, it is important to note that Social Judgment Theory was used primarily as a lens through which to interpret the data, and secondarily as a preliminary testing approach of the conventional, analysis-based model of negotiation.

2.3. Qualitative research and psychology

In addition to the theoretical framework, this study also draws inspiration from SJT methodological insights, particularly the importance of representative tasks.

However, as perspective employed in psychological research, SJT makes an intense use of multiple regression analysis, which, for instance, Hammond and others used successfully in their landmark analysis of cognitive processes of railway engineers, mentioned above (Hammond, et al., 1983; Hammond, 1988). Moreover, Gustafsson used a similar approach in studying cognitive processes of novice and expert entrepreneurs (Gustafsson, 2006).

It is therefore considered important to discuss the use of qualitative research methods in psychology. Indeed, qualitative research remains an outsider in psychology, compared to quantitative research, though this method is said in specialized textbooks to be developing fast (Madill & Gough, 2008, p. 254). Collecting qualitative data in psychology is said to offer "particular procedural clarity [...] through prescribing a priori domains of analytical interest, devising preprepared coding schemes, utilizing prior theory to interpret data" (Madill & Gough, 2008, p. 258). They also pointed out that "[i]nterviews seem designed to tap lived experience and, particularly in the semi-structured format, are the most popular method of qualitative data collection/generation in psychology" (Madill & Gough, 2008), allowing "to

make explicit their internal experiences [...] [and] the participants' tacit and explicit knowledge" (Madill & Gough, 2008, p. 256). This is exactly what this study is about, methodologically: inducing participants to share their experience of intuition and other cognitive processes in negotiations.

Moreover, it is interesting to note that in his later work, Hammond also used narrative accounts as main research materials, principally retrospective analysis based on testimonies to the US Congress (Hammond, 2000; Hammond, 2007). Moreover, it is worthwhile noting a study of nurses' decision-making processes which used both Hammond's cognitive continuum theory as a theoretical framework and semi-structured interviews and case scenarios as a methodology (Offredy, et al., 2007). Another study about thinking strategies used by registered nurses during emergency department triage utilized the same theoretical framework and think aloud protocols (Göransson, et al., 2008).

Finally, in their study of intuition in management, Hensman and Sadler Smith suggested to assume the reality of intuition, which is by nature "imperfectly apprehendable [...] [and therefore requires] to assist [solicited insiders] in determining the meanings and purposes that people ascribe to their actions" (Hensman & Sadler-Smith, 2011, p. 54). They also pointed out that intuition did not lend itself to a questionnaire-based standardized approach, but that "experiences of intuitive decision-making could only be approached by asking them for their first-hand accounts" (Hensman & Sadler-Smith, 2011, p. 54).

It is such a first-hand account of their experience which was used in this study. This aspect is developed in more details in Section 2.

3. Analytical framework: building a theory of tasks/environment and a theory of cognitive systems.

This project drew inspiration from Brunswikian and SJT methodological insights, in particular from their insistence of a combined study of theory of tasks and a theory of the person's cognition.

3.1. Principles

Indeed, as the Social Judgment Theory prescribes (Hammond, 1996; Hammond, 2000), a theory of tasks conditions, in a negotiation setting, and a theory of cognitive systems to help analyse the data were devised. As Hammond noted, "[t]he primary task for students

of judgment and decision-making is to discover the relation between the properties of the task and the properties of the cognitive system of the judge.

A theory of tasks or task conditions theory is necessary for both substantial and procedural reasons. At a procedural level, such a theory of tasks is necessary for the argument not to be circular. At the substantial level, it is necessary because, as set out in the literature review, different tasks induce different cognitive processes (intuition, quasi-rationality and analysis). In our case, negotiation tasks would be analyzed between intuition-inducing, analysis-inducing and quasi-rationality inducing ones. In particular, a disruption induces intuition and quasi-rationality. Such an approach therefore allows prediction of cognitive processes according to the task. To quote Hammond, "[b]y designing this task condition theory, it will therefore be possible, without circularity, to predict the cognitive change induced by changing circumstances" (Hammond, 2007, p. 125).

This means that the research should:

- "define the properties of each of the three types of judgment tasks independently of the judge's cognitive activity
- "list the properties of the task in study, locate it on the task continuum, and present a prediction of the nature of the judgment (described in similar terms) that the task induces" (Hammond, 2007, p. 125);;
- Hammond also added that "[t]he relative strength of conditions for inducing one or the other [correspondence or coherence] [meta] theory within subjects should be carefully ascertained and explicitly acknowledged" (Hammond, 2007, p. 7; 125).

Such an approach was used to explore the cognitive processes of negotiators. More precisely, it is proposed to design a negotiation task environment theory to illuminate and guide the investigation of the cognitive processes of negotiators in this research.

In practice, this means that negotiation tasks were analyzed between tasks inducing, respectively, intuition, analysis, and quasi-rationality.

Given the number of possible negotiation tasks and environments and the limited size of this piece of research, it became necessary to focus on a smaller number of tasks,

particularly those related to uncertainty, complexity or ambiguity. Annex V provides a larger set of hypotheses.

It is important to note the **heuristic value** of this approach, particularly in a qualitative research and professional perspective. The theory of tasks conditions and theory of cognitive systems are to be considered not so much-at this stage- as yet untested hypotheses but rather like a heuristic tool: “predictions as hypotheses” of the theory will show possible interesting zones of exploration in the interviews. Such hypotheses should then be refined and analysed, through other methodologies, which are not part of this exercise.

Based on the above, several rules of thumb are suggested to explore the cognitive processes of the respondents. Together, these constituted the analytical framework that guided the interpretation of the interview data

3.2. Negotiation tasks.

3.2.1. Analysis-inducing tasks

Analysis can be induced by negotiation task environments which have the following surface or deep features:

Chart 4 Hypothetical analysis-inducing negotiation task environments


<div> </div> <div> <h2>ANALYSIS</h2> </div> <div> <p> Slow information processing Sequential cue use Judgment process retraceable Local rules unavailable and used Low confidence in outcome High confidence in process Errors few, but large when they occur Consistent (high cognitive control) High cognitive effort required Leads to resolvable conflict Reliance on quantitative cues Complex organizing principles stored in memory Emphasizes left brain hemisphere Responsive to new cues Cues evaluated at measurement level Vicarious functioning obviated by concrete organizing principle Task specific organizing principle </p> </div> <div> <p>Source: Cooksey, 1996, p. 20</p> </div>	<div> <h2>Hypothetical analysis-inducing negotiation task environments</h2> </div> <div> <h3>Depth elements</h3> </div> <div> <ul style="list-style-type: none"> - preparing an agenda and a schedule - Reviewing a (draft) agreement - Quantitative preparation (statistical analysis or economic forecasting) or reviewing negotiation offers - using indicators to evaluate hardball tactics - analyzing a legal basis; preparing legal arguments - preparing arguments (in general), and pattern of evidence- in the form of numbers, actions, ideas"- in the hope that they will be induced to make a certain judgment simply on the basis of the "pattern" presented" (Hammond, 2000, p. 88), - analysing the coherence of the arguments from the other party - comparing information, interests, priorities or key issues - finding justification criteria for solutions found at the table </div>
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	<ul style="list-style-type: none"> - giving feedback and justification of decisions to sender - deciding on the basis of a strict negotiation mandate - Using indicators presented through numbers <p>Surface elements</p> <ul style="list-style-type: none"> - working on a document (negotiation draft etc) <p>Note: chart based on insights from Hammond, 1996; Hammond, 2000; Hammond, 2007.</p>
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3.2.2. Intuition-inducing tasks

Intuition can be induced by negotiation task environments which have the following surface or deep features:

Chart 5 Hypothetical intuition-inducing Negotiation task environments

<div> <div>INTUITION</div>  </div> <div> C H A R A C T E R I S T I C S </div> <div> <p>Rapid information processing Simultaneous cue use Judgment process not retraceable Local rules unavailable High confidence in outcome Low confidence in process Errors normally distributed Inconsistent (low cognitive control) Low cognitive effort required Leads to interpersonal conflict Reliance on pictorial/non- verbal cues Raw cue data/events stored in memory Emphasizes right brain hemisphere Resistant to new cues Cues evaluated at perceptual level Vicarious functioning (including shifting cue utilization weights) Weighted average organizing principle</p> </div>	<p>Hypothetical intuition-inducing Negotiation task environments</p> <p>Depth elements</p> <ul style="list-style-type: none"> - On the spot decision on uncertain matters; - deciding in situations of dilemma; - making trade-offs; - arguments on the receiving hand: unconscious search of patterns for coherence of arguments or seeking patterns of behavior; “pattern of evidence- in the form of numbers, actions, ideas” (Hammond, 2000, p. 88); - ideologically based political issues; - Lack of knowledge about issue at stake; lack of training or experience in negotiation; - Use of emotions or symbols or relationships between abstract ideas; - other uncertain task environments (such as: new negotiation partner); - Natural social encounters, including assessing accurately the behavior and/or personality of the other party; in particular: <ul style="list-style-type: none"> *its non-verbal signals *the reality behind a potential lie, threat or bluff; - Value-creation (intuitive creativity); - decision based on a pattern of evidence. <p>Surface elements</p> <ul style="list-style-type: none"> - Pictorial expression or representation of arguments/interests/motivations (Hammond,, 2007, p. 84) ;
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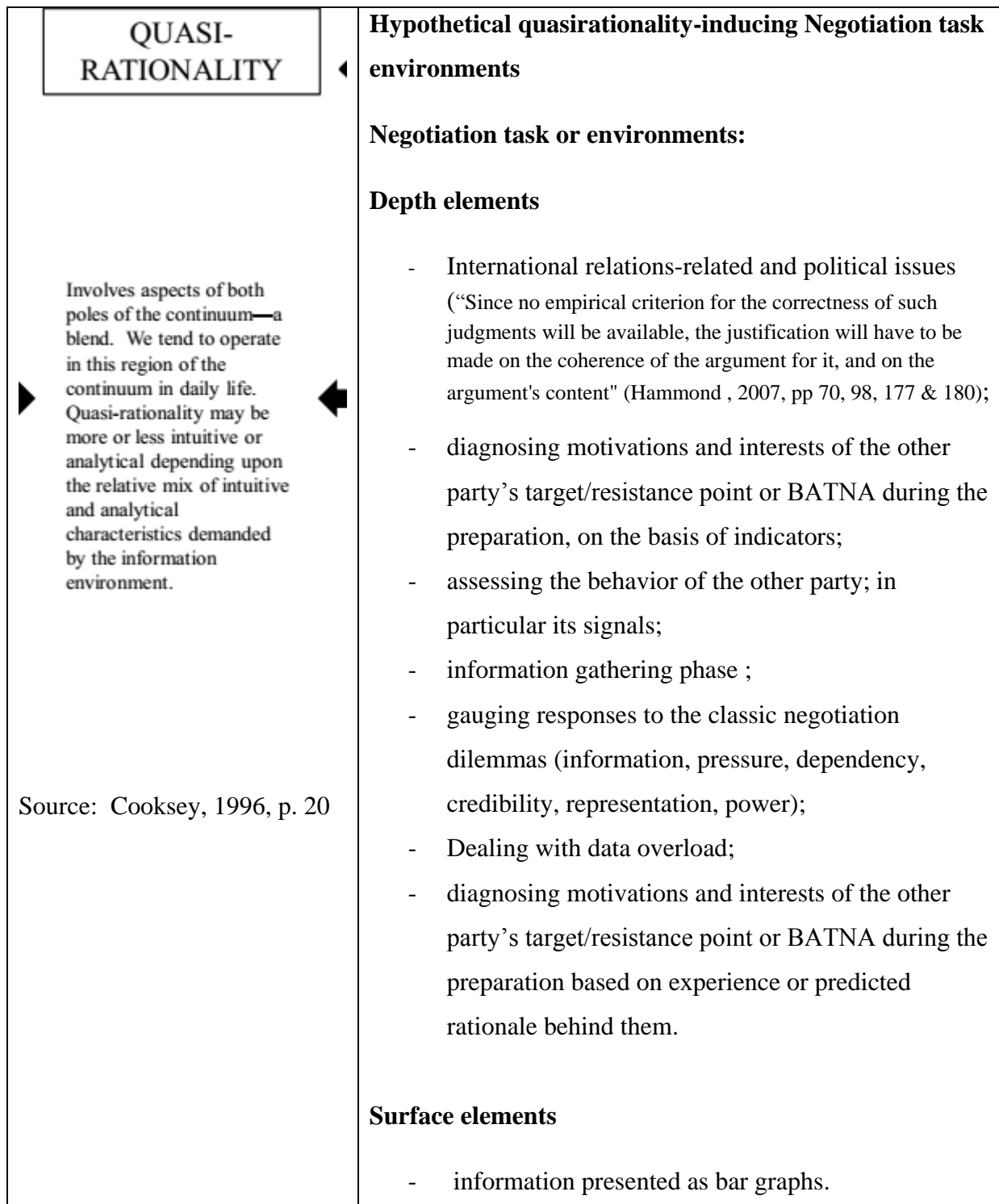
Source: Cooksey, 1996, p. 20

	<ul style="list-style-type: none"> - Diagrammatic representation (Hammond, Hamm, Grassia and Pearson in Goldstein & Hogarth, 1997, 151); - oral presentations. <p><u>Endogenous disruptions which may induce a cognitive move to intuition</u></p> <ul style="list-style-type: none"> -Bluff, threat and other deceptive tactics; -Time constraints (Hammond, 2000, p.79); -Negotiation preparation as part of a heavy workload. <p><u>Exogenous disruptions which may induce a cognitive move to intuition</u></p> <p>Noise, cramped and other difficult physical conditions for negotiating.</p> <p>Note: chart based on insights from Hammond, 1996; Hammond, 2000, Hammond, 2007</p>
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3.2.3. Quasirationality

Quasirationality contains variable amounts of analysis and intuition. Such a mode can be induced by negotiation task environments which have the following features.

Chart 6 Hypothetical quasirationality-inducing Negotiation task environments



	Note: chart based on insights from Hammond, 1996; Hammond, 2000, Hammond, 2007
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3.3. Cognitive systems.

A series of indicators were used to interpret the qualitative data, and distinguish which cognitive mode had been used in the experience recalled by the respondents.

Most of these indicators have been considered as valid markers of the respective cognitive mode in previous research, a reference of which will be mentioned where appropriate. They will be of a linguistic and cognitive nature.

These indicators are multiple and not necessarily cumulative (in that only one or several may be identified in the data), yet it is argued that they offer a useful rule of thumb. Their imprecise value is compensated by their usefulness as a heuristic tool.

3.3.1. Analysis

Cognitive indicators:

- Step-by-step
- Conscious
- Logically defensible

Formal indicators

- Use of mathematics, logics or argumentation

3.3.2. Intuition

Cognitive indicators

- Mostly unconscious (at the moment of use), including unconscious process of integrating of information coming from multiple fallible indicators (Hammond, 2007, p.148), such as signals (Hammond, 2000, p. 96), non-verbal communication etc. (Hammond, 2000, p.78; Hammond, 2010, p.331; Sadler Smith, 2010)

- *Non defensible by a step by step process (Difficulty of retracing judgment unless aided)*
- *Low confidence in process*
- *Rapid retrieval of information*

Procedural indicator

- Use of intersubjective validation of one's decision (Margolis, 1987, pp. 78-79; 94; Hammond, 2000, p. 133; 141).

Verbal indicators

- Verbal markers of uncertainty: for instance, "I am not sure why I did that", "I don't know", "perhaps/maybe", "most commonly", "may", "often", "usually", "seldom", "if", "frequently" (Hammond, 1988, p. 125; Hammond (Hammond, 1996 b, p. 285); "didn't look right". "They didn't fit together" (Krulak, 1996, p. 74; Hammond, 1996, p. 238; Effken, 2007) ;
- Explicit mention of:
 - * instinct, intuition, hunch, (gut) feel(ing)
 - * judgment (Elbanna, 2006);
 - * pictorial expression/representation (gestalt/completeness) (Margolis, 1987; Hammond, 2007, p. 84);
- Pattern recognition from prior learning and experience (message, stranger, photo, story/report: non empirically verifiable) (Hammond, 1988, p. 14; Klein, 1997; Hammond, 2000; Sadler-Smith & Burke, 2009);
- mention of a "pattern of data, actions and ideas" (Hammond, 1996, p. 63; Hammond, 2000, p. 88), of an holistic arrangement (Margolis, 1987; Vance, et al., 2007, p. 169; Hammond, 2010, pp. 83-84);
- mention of symbols or relationships between abstract ideas (Winham, 1977 (a), p. 98; Hammond, 2007);
- Words pointing to tacit knowledge ("adequate", "I knew") (Margolis, 1987, p. 82).

Substance indicator

- international relations =intuitive search for coherence.

- intuitive politics: “intuitive search for a coherent view that considers which problems are important, what make problems important and how problems should be solved”(Adelman, et al., 1975; Hammond, 2007, p. 177; 180).

3.3.3 Quasirationality

Cognitive indicators:

- As an in-between form of cognition, it will have features of both analysis and intuition;
- experience will be mentioned.

Substance indicators

"[Those] who manage international affairs derive their policies from experience and folklore; policies are not deduced from scientific laws or empirical regularities. [...] That process must be a matter of judgment. (...) policy-formation must be quasi-rational because of the form and materials of the task" (Hammond & Brehmer, 1974, pp. 341-342).

Conclusions

This study will be using a qualitative approach, aiming at collecting first hand data from respondents on real tasks. In order to be as representative as possible for the reliability of the data, a dual approach, dealing with tasks and the cognitive response was used. This means that, based on SJT insights, it was assumed that certain tasks induced a certain cognitive process (intuition, analysis or quasirationality), tasks about which respondents would be asked to recall and describe. Moreover, a series of indicators of the cognitive mode were suggested to allow the interpretation of the data from the interviews.

The next chapter will set out the specific methodology, called "explication interviewing", and the sampling approach which were used to collect such data.

Section 2 Methodology

1. Methodology.

It was suggested drawing inspiration from Brunswikian and SJT principles. As a consequence, it was critical to develop a theory of task and a theory of cognitive systems to guide the research process. However, unlike the SJT approach and its heavy focus on statistics, the suggested approach was qualitative. The latter was deductive/confirmatory in nature rather than inductive.

In order to undertake the exploration of the cognitive processes employed by negotiators, several approaches were considered. First, along with Hensman and Sadler Smith, a semi-directive interview of informants on the constructs themselves was possible, asking explicit questions about their experience of the different cognitive modes (Hensman & Sadler-Smith, 2011). It offered the advantage of being explicit and direct. On the other hand, it was also more susceptible to personal reconstruction, post hoc rationalisation and views mingled with value judgment and knowledge about the constructs. It was all the more possible since intuition is regarded negatively in the negotiation literature as well as by a number of people. Another drawback was the possible difficulty in explaining to uninformed respondents what the cognitive processes meant in this piece of research, in order not to mix up, for instance, intuition with some sort of “sixth sense” or “extrasensory perception”, which was not the focus here.

A second alternative would have been the use of vignettes, aiming at simulating certain negotiation tasks. This could be done by presenting different types of vignettes to negotiators, which would include a variety of tasks conditions whereby one could check the match between what was expected from this theory and the reaction of negotiators. These tasks would have to be intimately related to the reality encountered by negotiators. Hammond has used this approach in a quantitative study on railways engineers (Hammond, et al., 1984). A similar approach had been used in a research on entrepreneurial decision-making (Gustafsson, 2006). However, such an approach was abandoned because of the limitations of this exercise. It was considered that the exploration of the actual experience of negotiators took primacy over the analysis of their reactions to simulated situations.

Using retrospective interviews was a third alternative. It would aim at investigating the reactions of negotiators when they faced different negotiation task environments, on the

basis of what they recalled of their experience. Such an approach was put forward perhaps most cogently by Cooksey, a researcher in social judgment theory, who mentioned the possibility of using a posteriori, verbal protocols in judgment analysis research (Cooksey, 1996, pp. 53-54; 105-110). This is the reason why, ultimately, such an approach was adapted.

Moreover, unlike many qualitative approaches, the research instrument was guided, just like case studies, by theoretical propositions (Yin, 2009, p. 27), that is, the theory of tasks and theory of cognitive systems. It somehow departed from traditional case studies methodologies in the sense that triangulation was limited, as only semi-structured interviews were used.

2. Explicitation interviewing

2.1. General aspects

Ultimately, it was decided that a retrospective interview approach would be adopted. It would aim at investigating the reactions of negotiators when they faced different negotiation task environments, on the basis of what they recalled of their experience. Such an approach was put forward perhaps most cogently by Cooksey, a researcher in social judgment theory, who mentioned the possibility of using a posteriori, verbal protocols in judgment analysis research (Cooksey, 1996, pp. 53-54; 105-110).

The conduct of the interviews was inspired by insights from "explicitation interviewing". Developed by French psychologist Pierre Vermersch, its purpose is to "elicit a verbalisation of activity" (Vermersch, 1994, p. 17). Its theoretical basis is Piaget's theory on the processing of experience into reflection" (Light, 1999), and Husserl's phenomenology (Vermersch, 1994; Varela & Shear, 1999; Vermersch, 2012). It belongs to the "first-person methodologies, which means that "it is the study of the lived experience associated with cognitive and mental events" (Varela & Shear, 1999, p. 1).

To its originator, "the explicitation interview is a form of guided retrospective introspection" (Vermersch, 2009, p.23). The guidance differentiates the technique from mere introspection. Vermeersch specified that it aimed at *verbalizing action*, that is, "the description of how the task unfolded, as it has been effectively carried out in a real task" (Vermersch, 1994, p. 18). Vermeersch insisted on this procedural dimension of the task being "explicited" this way (Vermersch, 1994, p. 32; 44). As a consequence, the interviewing processes should focus on the "what" and "how", not on the "why" which would disrupt the

process by a posteriori rationalisations. Vermersch remarked that it is about "describing [...] a singular moment which is circumscribed and real (which I have in fact lived) (Vermersch, 2009, p. 39). Light noted that "because the chronology of the event is being relived, rather than just retold, there is little of the post-hoc rationalisation that often accompanies retrospective accounts" (Light, 1999, p. 2). Urquhart et al. noted in particular the potential of the technique for investigating introspective processes (Urquhart, et al., 2003). According to these authors, several interviewees commented on "how they surprised themselves with recalling thoughts of which they had not been fully aware of thinking at the time, [and] by the level of detail that returned to them in attempting to describe their activities" (Urquhart, et al., 2003, p. 69). As a consequence, it is argued here that such a focus on the tacit and procedural aspects of cognition and action was exactly what was needed in this project.

As precedents, such a technique had been used successfully in library and information science research (Urquhart, et al., 2003), in many other professional fields such as "education, training, analysis of practice and debriefing educational sciences and psychopedagogy, cognitive sciences, the control of industrial facilities, major companies, sports (athletics, rugby, football, refereeing, swimming), justice, health, bodily awareness and arts including performing arts" (Maurel, 2009, p. 85), including in PhD theses (Vermersch, 1994). For instance, Petitmengin used this technique for her thesis on "the intuitive experience" (Petitmengin, 2001). One of the major differences between our project and hers is that the latter is very generic, did not use the Hammondian-inspired framework, leaned much more toward a grounded theory approach and used an explicitly convenient sample of 24 people (Petitmengin, 2001, p. 101). Moreover, unlike Petimengin's thesis, this study focused on a number of negotiation tasks which were assumed to induce different cognitive processes, and with a sample of participants who were all negotiators, in the European Union context. It was deemed that such an approach would increase the representativeness of both the subjects' and the objects' sides.

2.2. Epistemological issues.

Vermersch noted that "[t]he descriptive expertise which is the heart of introspection is not innate in any way, it is provided by the interviewer in the form of non-inductive guidance of the formulation of the experience" (Vermersch 2009:23). Given the difficulties of introspection, a mediation through a trained second person, is considered necessary (Varela &

Shear, 1999, p. 8). The outcome of the interviews is, as Petitmengin described it, a “convergence of individual descriptions” (Petitmengin-Peugeot, 1999, p. 291).

The intersubjective aspect was critical. Indeed, to quote Varela & Shear, “no methodological approach to experience is neutral, it inevitably introduces an interpretative framework into its gathering of phenomenal data [...] but it does not follow from this that a disciplined approach to experience creates nothing but artifacts, or a “deformed” version of the way experience “really” is. [...] Whatever descriptions we can produce through first-person methods are not pure, solid “facts” but potentially valid intersubjective items of knowledge, quasi-objects of a mental sort. No more, no less” (Varela & Shear, 1999, p. 14). Velmans added: “once that experience is shared with another observer it can become intersubjective. That is, through the sharing of a similar experience, subjective views and descriptions of that experience potentially converge, enabling intersubjective agreement about what has been experienced” (Velmans, 1999, p. 304).

2.3. The interviewing process itself.

In a first stage, respondents were all informed about their rights as respondents, the anonymisation process and were asked to give an informed consent. This information phase was done in writing when they were asked to participate in the interview, and again before the interview started, when they were asked to read the informed consent form, ask any question and give their final consent to the interview (Annex I).

Then, the interviewee agrees orally on an informal contract with the interviewer on the in-depth interview about a specific event or task. This informal (moral) contract is considered key to guarantee collaboration and can be referred to later when appropriate.

The interview can then start and is based on the remembering of a precise, concrete moment which was about the investigated activity. It is indispensable to anchor this activity in a concrete, past, really lived experience. To quote Vermersch, “the only lived experience is in one lived moment. To access a lived experience, even a past one, and thus to create the fundamental condition for an authentic introspection of an intuitive donation of the lived experience, it is essential to focus on a specified situation and moment, as no lived experience exists in general. Relating to a ‘lived experience in general’ is not having a lived experience but having a thought about a class of lived experiences” (Vermersch, 2009, p. 39) (my

emphasis). As a consequence, during an explication interview, interviewees are gently guided to enter what is called “a state of evocation”, whereby “they are reliving an example of the action under investigation. As they are pressed to give details and thus explore the experience, they may provide insights both for themselves and the interviewers” (Urquhart, et al., 2003, p. 66).

In this study, respondents were invited to evoke a series of really lived and concrete negotiation tasks (list in annex I). Questions about the environment (for instance, description of the place, of the other people, calling upon sensory memory.) were used at the beginning of the interview to help both verifying the state of evocation (as opposed to generalizations, comments, judgments, etc.) and inducing the evocation.

During the state of evocation, questioning and prompting remained indispensable to keep the discussion flow, or to explore specific aspects (Urquhart, et al., 2003, p. 68).

2.4. The Analysis process.

Twenty-six respondents were interviewed, each for between one and one a half hours. More time or additional interviews was impossible for such busy professionals. All interviews were recorded, with the agreement of the respondents.

They were completely transcribed. After several readings of the materials, emerging and redundant themes emerged. Quotes were then classified into these themes. The latter formed the structure of the interpretation of the data. More information about the initial questions, the interview guide, and the data analysis are, respectively, in annex II, III and IV

3. Sample and sampling process.

In order to increase the reliability of the observations, it was decided to carry out this research with actual negotiators. Indeed, as Cooksey, a judgment analyst, noted the degree of familiarity of the task has an important impact on the representativeness of the task. Students, for instance, have a low familiarity with negotiation tasks. Conversely, professional negotiators have, by definition, a high familiarity with negotiation tasks (Cooksey, 1996, p. 89).

Negotiators working in the EU context were considered a useful unit of analysis for the following reasons. The European Union is one of the most important transnational actors,

where negotiation is a core working method, activity and ethos. As indicated in the literature review, literally thousands of formal and informal negotiation sessions, within EU institutions, among them and with external stakeholders (from States to other international organizations to NGOS to contractors) are conducted in the EU environment each year. For instance, there are about 10,000 staff involved in the broad field of coordination and negotiation of legislative and policy initiatives in the European Commission alone (Kuus, 2011, p. 7). It was decided to narrow down the parameters of the sample to make it more manageable. A request to participate in this study was sent to several hundreds of current negotiators working in the EU context, in different EU institutions. Initially, requests were sent to former participants in the European Commission's negotiation training programme, of which I had been in charge. Faced with a limited number of respondents, a search was made through the service guide of the Commission to identify additional potential respondents. On the whole, out of the 26 interviewees, there were twenty respondents from the European Commission, three from the European External Action Service, and one from the European Parliament (who had also worked in the European Commission). Last, two respondents who were retired officials or EU diplomats were also approached and eventually included in the study. It is argued that such a sample cannot be defined as convenient, since the population to which they belong is clearly identifiable (Cooksey, 1996).

In their study of intuitive decision-making among managers, Hensman and Sadler-Smith (Hensman & Sadler-Smith, 2011, pp. 54-55) used a sample of 15 senior managers, which they considered "comparable with that of other studies of intuitive decision-making in naturalistic settings". Hensman and Sadler-Smith further argued that the non probabilistic feature of such a sampling method was acceptable because of the inductive and exploratory nature of his research project, and because he "did not aim to employ any statistical techniques in the analysis of the data" (Hensman & Sadler-Smith, 2011, pp. 54-55). Since this project had similar aims and parameters, it was felt that a similar number of 26 negotiators would constitute a sample large enough to represent a diversity of views, while also being small enough to be manageable within the confines of this project.

It is useful to put into perspective the approach taken in this study, which uses a limited yet not simply convenient sample of negotiators, within negotiation research in general. Indeed, Gordon et al. mentioned that experimental research on negotiation mostly used (American) university students (Gordon, et al., 1984). They also pointed out that this

very fact was “controversial” (Gordon, et al., 1984, p. 221) since Schultz showed long ago that college students could not be considered as representative of the adult population (Schultz, 1969). More recently, Peterson conducted a meta-analysis on the use of such a student population in social science research. He concluded that “caution must be exercised when attempting to extend any relationship found using college student subjects to a nonstudent (adult) population” (Peterson, 2001, p. 450). In negotiation research, Buelens et al.’s recent study showed that students (in psychology, or business/MBA or unspecified specialism) made up about 81 % of the negotiation research samples over the 1965-2004 period (Buelens, et al., 2008, p. 332). This means that subjects were formally sampled but they were more often than not representative. Indeed, this study showed that professional negotiators (which they define very broadly as “all those whose core job is to negotiate”), represented only 3.2 % of the samples for the 1965-1994 period, and only 2.5 % for the subsequent period, to which one could perhaps add another 3% representing “managers” (that is, “another class of experienced, real-life subjects who need to rely on negotiation skills as a necessary, but not exclusive, part of their job”) (Buelens, et al., 2008, p. 332). They considered that seasoned negotiators should be the subjects of such research, “[i]f the goal of research is to understand negotiator behavior” (Buelens, et al., 2008, p. 336). As a consequence, negotiation research may have explored the natural cognitive abilities of human beings (or of American students) in negotiation situations. That may well be a worthy scientific endeavour but, arguably, this does not have much relevance for the understanding of how negotiators actually behave. Moreover, and importantly, this means that several of negotiation research's prescriptions may have been based on an inadequate subject sample.

Conclusions

The use of explication interviewing aimed at collecting first-person accounts of actual experiences of 26 EU negotiators related to specific negotiation tasks, which were predicted to induce a specific cognition mode. The collected data were then analysed through the lens of cognitive indicators. It is argued that, on the one hand, the theory of tasks allowed the identification of task environments where specific cognitive modes could be found, and on the other hand, the theory of cognitive systems allowed to interpret and classify the data in accordance with the cognitive mode (intuition, quasirationality, analysis).

Section 3 Limits

This study is limited in several ways:

- The actual efficiency of the different cognitive modes is left for further research; yet, it is argued that this piece gives a better description of the cognitive processes employed by professional negotiators;
- Its subject sampling is limited. At the same time, this study does not seek full generalization, even though it sought to be as representative as possible to generate hypotheses which could be used for further research to generalize beyond the laboratory.
- The interpretation of the data was based on several cognitive indicators, some of which may have been redundant and/or inadequate, while others may be missing;
- The descriptions produced by explication are, to quote again Varela and Shears, "potentially valid intersubjective items of knowledge, quasi-objects of a mental sort. No more, no less" (Varela & Shear, 1999, p. 14).
- As Doherty and Kurz noted, first of all, "[n]ot all cognitive tasks can be so easily related to the [SJT] framework" (Doherty & Kurz, 1996, p. 132); second, "there is as yet no theoretical work that takes into account the fact that the subject can construe the task to be very different from that which the investigator intended" (Doherty & Kurz, 1996, p. 134).

Section 4 Ethical considerations

A number of ethical issues were duly taken into consideration. They concerned on the one hand about access and confidentiality, assumptions and on the other hand about taking into account my own interests in the consequences of the research itself. Measures, which are detailed below, were taken to ensure, as mentioned in the course materials, "to work to avoid potential for exclusionary, discriminatory and offensive language, assumptions or behaviours, the misuse of [my] position as researcher and any deceptive or intentionally misleading practices".

Access

Getting access is a classical yet important issue in social research, particularly because I may be considered as an insider. Indeed, being a former staff of the European Commission and being still a staff member of a sister institution (since 1st September 2011, the Council of the European Union), I had a personal network of people working in the field. This status favoured access to information and people but it did not relieve me of ethical obligations in that respect. On the one hand, I clarified my “status” and identified myself not as a colleague but as a researcher.

It is important to note that this doctoral programme has been done and financed completely in my private capacity and outside working hours. I did not intend to inform my employer about my project, since all interviews and research were done in my private time.

Respondents were fully informed of the research objectives and confidentiality measures.

Confidentiality

Confidentiality in this project was important, since negotiation in the EU context is often about confidential matters. In that respect, I ensured that data and information are properly stored and protected. I also ensured total anonymity of my respondents, including by removing any contextual elements which could be used to identify them. Moreover, I applied principles of openness and honesty. I also offered respondents the possibility of commenting my research results and of getting a copy of them. I also sought their guidance before publishing any material which may be deemed sensitive, which eventually was not the case, given the thorough anonymising process and the fact that the interviews were exclusively about cognitive processes rather than on substance and personal matters.

Avoiding deceptive practices and negative assumptions.

Like any researcher, as McDonald and Sanger put it, “*creating the conditions in which the interviewee says what he means, means what he says, says what he thinks and thinks about what he says, are the major tasks of the interviewer*” (MacDonald & Sanger, 1982).

I reflected on my personal assumptions on my research topic and its milieu. I strove to be critical while being non judgmental. Moreover, I strove to devise research questions and

instruments which ensured a high quality information without being manipulative in the process and judgmental in the analysis.

Language aspects.

As far as language is concerned, I avoided any exclusionary or discriminatory language. I tried being careful to use a gender neutralisation when writing about "the negotiators" in general.

Working with other people's data and work.

While I undertook the critique of other researchers' work in my thesis, I strove to ensure that recognition, credit and respect to the work done and to never make it a matter of personal criticism.

Ethical fieldwork, including power relations

After securing permission and access to my research field, I strove to build and maintain relationship, ensure confidentiality, comfort and trust with my respondents. I did so by behaving as described above. Power relations did not appear as an issue.

Plagiarism

I was obviously committed to avoiding plagiarism in this project. In order to limit its unconscious version as much as possible, I referenced other people's works, ideas and influences, as much as I could, intensively and possibly more than may have been expected.

Chapter 4 Findings

Introduction

This research aimed at exploring the different cognitive processes used by negotiators as they experienced them in real negotiations.

The research questions examined through the research were:

- 1° What are the cognitive processes experienced by negotiators, particularly under uncertainty?
- 2° What are the negotiation tasks inducing non analytical cognitive processes?

To address these questions, it was suggested in the literature review that it would be original and illuminating to adopt a Social Judgment Theory (SJT)-inspired theoretical and methodological framework. The latter promotes the view that research should conduct an investigation of people's behaviors in their daily environment. Research should therefore explore real life tasks and classify them (Brehmer, 1984, p. 392). According to Brehmer, the outcome of such an investigation would serve as a means to "provide rich sources of hypotheses" (Brehmer, 1984, p. 390). This is the perspective which will be followed in this research.

In practice, this means exploring negotiation tasks in context and classifying them in accordance with the process they are interpreted to induce.

In this chapter, the data from the interviews will therefore be classified in accordance with the mode of cognition which was identified. This task was accomplished by using indicators or markers of the respective cognitive mode. Such indicators were defined in the previous chapter. It is assumed that such markers, however rough and imprecise they may be, will shed light on the data and their interpretation.

Moreover, whenever it is appropriate and possible, the potential consequences of the cognitive mode, and particularly of the difference of cognitive modes between negotiators or between the negotiators and their principals will be mentioned. Such potential consequences are deemed important because they may be useful in drawing out the implications for the practice and the training and development of negotiators (one of the foci of this study).

Section 1 Analysis-inducing tasks: the case of the impact of the legal and bureaucratic environments on cognitive modes.

First of all, it is suggested that data from the interviews pointed to several surprising elements:

- they delivered relatively few instances of negotiators employing clearly analytical processes, as defined above;

- there was a perceived discrepancy between what respondents themselves considered as "analytical" and on the other hand what would be considered analytical on the basis of the SJT framework. For instance, some respondents mentioned relatively elaborate methods of preparing negotiations (scoping exercises), which were interpreted by the respondents as "analytical". Yet, by SJT standards, such methods were interpreted reflecting a quasirational cognitive mode.

- on the other hand, the interviews suggested that the legal and bureaucratic environments may have had an impact on the cognitive processes of the respondents. More specifically, the data suggested that such an environment may have induced both an analytical cognitive tactic and a coherence cognitive strategy. The latter "evaluates the consistency of the elements of a person's judgment" (Hammond, 1996, p. 106). It is about logics and consistency. It is in such a task environment that the cognitive mode of the respondents was the more clearly analytical.

In addition, it is argued, and further developed below, that such an element is important, particularly from a practice viewpoint, since:

- a difference in cognition can lead to cognitive conflicts, not only with other negotiators, but also within the organization, if the negotiator's (as agent)'s cognition is not aligned with that of one's principal

- the potential discrepancy between the cognitive mode induced by such a task environment and the negotiation task itself may lead to unsuccessful negotiations.

1. Bureaucratic environment and political expediency

The data presented below suggest that the bureaucratic environment may have influenced the cognitive mode of respondents.

As recalled in the literature review, the relationship between agents and principals is considered as key in negotiations. Negotiators are agents who have to report to a principal (management, political leadership) (Sebenius, 1992; Moffitt & Bordone, 2005), or seen from the other side, the principal has to “ratify” (accept and validate) the decisions of the agent (Lax and Sebenius, 1986, p. 312; Mnookin & Susskind, 1999). It was a theme which regularly appeared in the interviews. For instance, respondent 13 commented that:

“the difficulty in selling this was there were different views of how, even my superior would be judged against what is the global deal. [...] This is a real issue that... in the Commission’s negotiations, I mean, there is always a boss, ... in the end it’s [institutions] to decide and they may decide for very different reasons”.

It is suggested that this may have important cognitive consequences at several levels, which will be examined in turn:

- Since negotiators have to justify their decisions, their cognitive mode may be driven towards a **coherence** strategy (logics) instead of correspondence (accuracy);
- Political justifications may induce **weaker cognitive** modes (intuitive or quasirational coherence in the receiver

1.1. Justifying and political expediency induces a cognitive shift towards a coherence cognitive strategy

As mentioned earlier, negotiators are agents who are accountable to the principals, to whom negotiators have to explain and justify their decisions. in particular, Anderson pointed to the unacceptability, in international politics, of new decision proposals which cannot be justified by arguments or which are not based on precedents, due to the necessity of consistency (Anderson, 1981, p. 738). Such arguments must also be in line with the objectives of the organization, often called, in international politics, “national interests” (Anderson, 1981, p. 754).

1.1.1. Justifying and coherence cognitive strategy

Justifying is about demonstrating the coherence or logic of one's decision. This is the hallmark of a coherence cognitive strategy (Hammond, 1996; Hammond, 2007). The justification of the decision can take the form either of a logical reasoning, or that of conformity with precedents.

Given the international political negotiation environment the respondents were in, it is suggested that such a dynamic was at work in several respondents' experience, and that it may have had a cognitive impact on their cognitive mode.

Respondent 20 mentioned explicitly the logics of the negotiation decision for the validation of his negotiation decision by his own management:

"I would say that it is **the logic of the decision**; we take many decisions, it is about legal bases and other more operational decisions which must be coherent with each other. So it is true that an individual [economic] operator sees the decision in an isolated fashion, but we must give a **logical, coherent frame** to all our decisions" (my emphasis).

Indeed, it is usually very difficult to put forward a justification based on lower cognitive modes, for instance experience. Said Respondent 2:

"No, you cannot just say "experience", you cannot argue with experience, that's naïve, you would have to say "ok what are your reasons?"

It is contended that respondent 2's response echoes Halperin's claim whereby "participants advocating a change in policy must state some argument in favor of the change even if they do not feel free to state either the reasons that lead them to favor a new policy or those they believe would persuade others in private" (Halperin, 1974, pp. 136-137) (quoted in Anderson, 1981, p. 744). In addition to Anderson's interpretation of the latter as "private preferences and reasons" (Anderson, 1981, p. 744), it is contended that, in a negotiation context, the apparent self censorship of the "real" reasons by respondent 2, may have a cognitive nature. It is interpreted as the need for respondent 2 to change cognition, in a justificatory task, from a correspondence cognitive approach (that is, a cognitive strategy which aims at accuracy of judgment), based on quasirationality (which

includes experience, see below), towards a coherence strategy (which aims at logics and consistency) and an analytical approach. As it will shown below, such a position could be nuanced by the hierarchical level of the negotiator, as well as by the level of trust of one's principal.

1.1.2. Political expediency and conformity to precedents

Moreover, due to the bureaucratic work environment, some respondents, particularly at a lower level, appeared to have been induced to focus cognitively on taking decisions based on precedents. The latter decisions are described as *easy to justify decisions*. To quote Mercier, "one of the predictions of the argumentative theory is that when reasoning is used in decision-making, it should push people towards decisions that are easy to justify, but not necessarily better" (Mercier, 2011, p. 89). Such easy to justify or less controversial choice in negotiations are usually based on precedents and/or comparable deals. This is what Respondents 23 and 13 pointed to clearly. Said respondent 23:

What I'm trying to focus is on...trying to find objective negotiation points with them which would be **based on previous agreements with them** [...] where I **could get analogies**, and...**if they had agreed on something which I'd like to use in my agreement so that I could refer to what they have already agreed** [...], **it's easier, especially in an organisation where they seem to be very hesitant** [...] **I can argue with that "you have already agreed on these ones", that makes it possible for him to agree on"** (my emphasis).

Respondent 13 mentioned the easy road trick, and its potential danger of doing otherwise:

"you'd better come with a case that fits precedents because that needs a one-line note: "deal done in line with what we got from [other negotiation]", or "deal done, structure difference, on balance better than what we had", because if you say better than what we had, then you risk the question why didn't you get the same thing in the previous deal? And if it's different, you have then to explain, you still have to explain why it is still better. So and everyone is pressed for time, **the higher up you go in the hierarchies, you have a tendency to give precedents, it's easier to justify, to sell it"** [...] **And sometimes you have the easy measuring stick** [for checking whether the deal is good overall] **of just**

saying: we've got this there, so it has to be the same here, because there it's so easy, you just say: we got the same thing [...] [t]here is a temptation to go for the matching deals because you can refer to precedents and it's difficult to criticize you" [my emphasis].

At the same time, negotiators know that each situation is different, and therefore may demand different solutions, as Respondent 13 put it:

"[...] Having individualized deals that are not necessarily comparable but fit better the concrete situation, ...you risk also not getting the best win/win if you just do matches with existing agreements, you may have a better scope for win wins if you know what's the minimum you want to get but on balance, ... You have to see through different angles to see what would be the best mix and then also you are in a negotiation so you always need one other side to agree."

However, Respondent 10, who is a relatively junior negotiator, pointed to his use of easy to justify negotiation solutions in order not to be in conflict with his management:

"The dilemma was: do I make a concession or do I block the exercise? [...] because I genuinely didn't have any margin to make concessions...so basically by...by...stonewalling and by being intransigent and obstructive in the end. [...] In the end I concluded that to make the concession would not have been acceptable and it would be less damaging to me and less ...**less controversial with my authority** to block the deal than to make a concession, I didn't have the authority to make the concession".(my emphasis)

Indeed, not using precedents may lead to a clash with principals, which is called in the negotiation literature as the "representation dilemma", whereby stakeholders have the tendency to be more demanding than their negotiators (Mastenbroeck, 1980, p. 23). Respondent 13 described his unfortunate experience of such a situation:

"**my feeling as a negotiator** was that in order to obtain a maximum for us ... in a negotiation containing many, many items, that on a given item, ... I had gotten enough, I knew it was a bit less than their red line and we had officially agreed but my feeling clearly was: here it is worth making a gesture towards my counterpart so that my counterpart can walk from the table saying: "I have

obtained something”, in order to build up momentum for getting more than the red line on other points, bits and pieces, **and my management did not at all share the approach , saying: “no, no, no, it has to be this redline here at any price”** (my emphasis).

However, some respondents chose the difficult road of not sticking to precedents. This will be dealt with in the section on the impact of hierarchical levels on cognitive modes.

Importantly these findings illustrate the point that several respondents highlighted the impact of the political expediency on their cognitive strategies and tactics. In particular, the necessity to justify one's decisions may have induced some of them towards a coherence and analytical approach. Such an assertion also confirm Winham's investigation with US State department officials, whereby the latter were said to give as much or more importance to the relations with their government rather than to the relation with the negotiation counterpart (Winham, 1979, p. 116). It also gives empirical support to the claim of political scientist George that decision-makers are “consistency seekers” (George, 1980, p. 61). This may have lead some to feel the need for congruence with their principal's assumed cognitive mode (understood as their need for justification based on precedents) and thereby to have used an a priori cognitive mode in the negotiations themselves. The use of a coherence approach is not bad per se. Indeed, to quote Winham, "the more structured the rules, the greater the likelihood that a strategy can be applied" (Winham, 1979, p. 122). This is interpreted in that the latter would induce a coherence strategy. Moreover, such a structured and rule-based environment defines appropriately many negotiations in the EU environment. It may therefore lend support to the choice of an a priori coherence and analysis-based cognitive mode.

Yet, negotiations are not only about substance and process, where strategies can be easily applied, it is also about people and interpersonal interactions (Lempereur & Colson, 2010). And the latter are uncertain by definition (Hammond, 2006, p. viii). The latter requires the application of other cognitive strategies (correspondence) and tactics (intuition or quasirationality), which an a priori cognitive choice prevents from doing by definition. Very often, the political decision-makers do not know the concrete details of the negotiation, be they substance or parties-related, since they were not present. To this is added "the uncertainty that often interposes itself unavoidably between principals and their bargaining agents", who "can only glean probabilistic information" about their principal, and tackling

such an uncertainty is considered as a "pervasive" aspect of such negotiations (Lax & Sebenius, 1991, p. 475). It is therefore argued that such a situation may have an impact on the negotiators' own cognitive processes, in the sense they may have to adapt those processes to the cognitive needs of their principal if they wish to increase the chances of approval of their negotiation decisions, which is also an important element in a negotiation. It is argued, with Hammond, that under such conditions, their cognition will be induced towards a coherence strategy and, depending on the form of the task (oral or written), their cognition will be induced, respectively, towards an intuitive or analytical mode.

Moreover, in some cases, the coherence and analysis-based justification may lead to conflict with one's principal: the fact that justifying one's decision by reasons which may not have been present at the moment of deciding may be detrimental to the justification process itself. Indeed, negotiators decide on the basis of objective criteria but also on the basis of a rich variety of information sources, including cues from the social environment. As a consequence, if justifications are based solely on analytical elements, which may not even have carried the day on the ground, the justification may be perceived as inadequate by the principal and may therefore jeopardize trust and the quality of the final decision. This gives empirical grounding to George's assertion that "to be sure, this penchant for consistency seeking may hamper [the decision-maker] in his role as problem solver" (George, 1980, p. 61). This also echoes Mnookin et al.'s claim that the negotiator's better understanding of the negotiation situation on the ground may lead to misunderstanding by the principal, because of the inability of the negotiator "to convey the full nuance of what happens at the table to those she represents", leading to the following paradox: "because she knows more, she is trusted less" (Mnookin and Susskind, 1999, p. 36) (idem). Conversely, if there is a robust trust between the negotiator and the principal, it is suggested that this may allow the former to deploy all cognitive modes as required by the circumstances. This aspect will be dealt with in the section on the impact of the hierarchical levels on cognition.

In the same vein, the EU is an environment where legalism reigns supreme. This appeared, in a way or another, in many interviews (Respondents 3, 4, 6, 7, 11, 15 and 26). The need to justify negotiations in accordance with the Law, induces cognition towards coherence and analysis. If such a legal justification becomes a prime concern, over the finding of a pragmatic decision, this may lead to blocking negotiations (Respondent 3). Indeed, as Alvarez pointed out, "[r]itualized institutional precedents may sometimes limit

negotiators' field of vision; path dependencies, such as an infatuation with decisions by "consensus" however cosmetic, may lock negotiations onto the wrong historical path or result in meaningless lowest common denominator solutions (Alvarez, 2002, p. 222). Sitkin and Bies also noted that, what they called "an obsessive consistency in applying those [legal] rules" could jeopardize the necessary flexibility needed for deciding (Sitkin & Bies, 1993, p. 30).

Conclusions.

In this section, it is argued that analytical cognition was induced by two main environmental conditions: the bureaucratic and political (and possibly legalistic) task environments of the respondents. Such task environments share the common feature of requiring coherence, be it in the form of coherence with the existing laws or precedents, a justificatory process, or more simply the need of internal consistency of the arguments put forward.

Some of the data indicated that some respondents may have pre-empted their cognitive approach during negotiation by preferring easy to justify decisions, that is, based on coherence, instead of using the cognitive mode adapted to the task, but which would have been more difficult to report and to justify, for instance their experience or intuition. Indeed, negotiators face task environments where the accuracy of perception (of non-verbal as well as verbal signs) as well as the accuracy of judgment in general are crucial. Here, a correspondence cognitive strategy (that is, aiming at accuracy of judgment) may be more adapted to the task. Given the great uncertainty and the high number of cues available in the environment, a negotiator will therefore probably be using weaker cognitive processes such as intuition or quasirationality (see next paragraph). However, since such processes are cognitively covert and only partially retraceable, they can be explained only with difficulty. As a consequence, a justification based on them will be more difficult to express and to be accepted by a principal. Moreover, to quote Hammond, "in any correspondence demanding task, the limit of empirical accuracy [...] is controlled by the information of the task" (Hammond, 2000, p. 85). As a consequence, since the correspondence to reality of each fact presented by the agent is not strong, the principal will have great difficulties to make an accurate judgment on what is being presented, and therefore, the principal's only option is to judge the coherence (Hammond, 1996, p. 238), the internal consistency of the arguments put

forward by the negotiator. Therefore, as suggested by some interviews, in order to avoid conflict or difficult to justify decisions, some respondents may have decided to shift their cognitive strategy to coherence at the negotiation stage, to be in tune with their principal's when the time of justification comes. This assumes an a priori cognitive choice, rather than a choice adapted to the situation. On the basis of experiments of Hammond and others, it is also suggested that such an a priori cognitive choice may not always be beneficial for the quality of negotiation decisions.

Such an a priori cognitive choice, heavily bent towards coherence and analysis, is also the prescription of the dominant negotiation paradigm, where "rationality" is prescribed in all tasks and circumstances.

Lastly, the elements presented here find an echo, and provides new empirical confirmation, in the differing cognitive modes found in political science research. For instance, Newhouse, in his study of the nuclear disarmament negotiations between the US and the USSR, noted that there was a discrepancy between the American bureaucracy's analytical perspective and the White House's "subtler and more political" one (Newhouse, 1989, p. 180).

It is therefore suggested that the task environment of the negotiators in a bureaucratic environment may induce them towards coherence and analysis, in the reporting stage but also possibly during the negotiation stage.

Section 2 Intuition-inducing tasks

Intuition is defined as a “cognitive process that somehow produces an answer, solution or idea without the use of a conscious, defensible, step-by-step process” (Hammond 1996, p.60).

Note: the indicators of intuitive cognition which were used to interpret the data, as drawn from the literature review, are listed in the methodology chapter.

1. Social interaction-related tasks: assessing the negotiation counterpart and assessing the dynamics of a negotiation

As will be shown below, the data suggested a wide reliance on intuitive cognitive processes in sizing up negotiation counterparts and the dynamics of a negotiation. Assessing the negotiation partner and the dynamics of a negotiation are social interaction-related tasks: they are about assessing with as much accuracy as possible the negotiation partner or the atmosphere/dynamics of the negotiation. As described in the literature review; assessing or sizing up the negotiation partner is often described as a key task and skill in negotiations (Pye, 1982, p. 52; Curry, 1998, p. 37; Hodge, 2000, p. 209; Business Literacy for HR Professionals, 2005, pp. 145-147; Thompson, 2007, p. 53; Moore & Woodrow, 2010, p. 154). Indeed, to quote Garfield and Whyte, “[w]hile the arguments go on, a personal sizing-up process necessarily goes on also” (Garfield & Whyte, 1950).

1.1. *Sizing up the other negotiator.*

Many respondents pointed to verbal and non-verbal elements as cues, from the tone, to the speed of speaking, or sometimes some very subtle cues such as that reported by Respondent 14:

“Instead of letting words, the final words of a sentence or a paragraph end [...], he's trying to hold on the last word and keep it for himself, so it's... [...] and there is this painful silence that breaks the ...I would say, the natural dissipation of the word”.

Respondent 13 called upon an analogy with a basic sensory skill to assess the other negotiator:

"[it was useful] you have seen the person before, that you have **smelt** the person before [my emphasis], well there is much you take in even without realizing it about the person and... and it also showed you there are things you share".

On their part, Respondents 10 and 16 pointed to other non-verbal elements, such as the body language, and particularly their monitoring of the composure of the counterpart. Said Respondent 10:

"I would say it's not a very...scientific... processes, it's more...based on accumulation of impressions, of course...on complex issues...then there is more in depth analysis of...different alternative options ...but as I said, it's mainly based on ...an accumulation of impressions".

Respondent 5 made intriguing comments on the way he carried it out:

"You always have to **have all your antennas out** and see what's going out and sometimes it can be something very simple and very straightforward [...] I think you're doing that all the time. The question is: there are times when all of a sudden **you feel there is a need to do it more**. So, hmm, but you have to stay awake all the time [...] however long the other person talk you have to watch and listen, and try to understand. [...] **It's instinctive. I am not doing it as a technique** [...]. What do I do? I watch people's eyes, I watch whether they are looking around to see somebody else's approval or express something, to their team mates, ..., with a quick look".

Respondent 10 added:

"it's a combination of [...] the advice of trusted colleagues plus my own gut feeling".

The data suggests that this very often takes place, whether the negotiator is aware of it or not. It is a basic cognitive task, based on perceptual cues. Respondent 14 acknowledged this intuitive and cognitively covert aspect: "I don't know how I got that feeling". Several Respondents were aware of the fallibility of such indicators (respondents 10, 14, 16). Respondent 14 put it crisply:

"It may be a false clue [sic] because I have no means to test it".

1.2. *Sizing up the dynamics of a negotiation*

On its part, the perception and assessment of the negotiation dynamics is something which may come very rapidly, almost like a flash, as Respondent 5 noted:

"there was this personal flash that came out, so we knew we were hitting a hard point there".

or rapidly after the beginning of a negotiation session, as respondent 18 suggested:

"It takes 20 minutes, half an hour".

Respondent 5 was somehow more cautious than others and waited longer before making up his mind:

"The real negotiation starts and then you get a feel for the dynamics. I think it's misleading in the first ones, everything is very cautious, very uncertain, polite, maybe a bit formal, ..., maybe not, depending on the speaker, but you only begin to understand how it's going on maybe after 3 or , ..., 3 sessions like that".

Even if it can take longer, the "feel" of the dynamics was often mentioned, explicitly or implicitly, by respondents (respondents 4, 5, 7, 9, 11, 12, 14, 15, 19, 21). Respondent 12, though relatively junior, even pointed to the importance of sensing the dynamics at work, as a key moment:

"The critical moments when things would be deblocked and you would make progress, are very limited to maybe 5 or 10 minutes. And you should not miss these ones because this is when everything is taking place. [...] you should not miss it, so my...my behaviour when I enter a negotiating room, is to make sure that I'll stay focused on this to receive all the [...] messages that will show that there will be a possibility to make progress on this and this".

In the case recalled by respondent 11, he pointed to the perceptual nature of the tacit understanding which developed between him and the representative of one of the most important negotiation players:

"It's perceptual, just a thought, [...] somebody saying to me: you cannot queue, myself saying [that]".

Respondent 14 even mentioned a physical reaction in his own body:

“[The] same feeling of potential oppression and here it was more felt physically, in the chest”,

This is in line with most descriptions of intuition in the management and psychological literature, which points to somatic markers and emotions in the arousal of intuition (for instance, Dane & Pratt, 2007, p. 38).

In addition to more perceptual elements such as noticing who was present and how negotiators moved around in the negotiation room:

Respondent 11

"First of all there are things that are said...but then how things are said, movements...body language...colour of the face...you can see...how...or you can think that you can see feel what it feels what he says or how strong it is for him [...] through previous sessions of negotiation, the movements of people: who goes to see whom, who gives papers to whom, ...when movements happens, it is very important to see who are the important players".

He added:

"This is the whole part...sometimes you feel it, it's subconscious... and sometimes you reason, you can tell. Plus the preparation helps, because you know, you have discussed in confidence so they know they have told you: this is too much for us, and then there [emphasis] you can see how much it is for them because **you can see also the physical reaction**" (my emphasis).

In such circumstances, the task is about noticing and interpreting signals and signalling, well-known features of diplomacy and negotiation (Cohen, 1987; Rana, 2001).

Respondent 18 pointed to very important elements in that regard:

"There is the body language, there is all the rituals of the diplomats".

In that respect, diplomacy expert Barston pointed out that “signalling is an established part of traditional diplomacy, and provides additional or other means of communication. It is, however, one of the least straightforward aspects of statecraft” (Barston, 2006, p. 42), which

can be verbal or non verbal. In addition to the above, non-verbal signals, which are mostly unconscious at the time of their cognitive reception and interpretation, are also commonly used by negotiators to interpret the behaviour and discourse of other negotiators (Cohen, 1987; Kennedy, 1998, p. 154).

On his part, Nieuwmeijer (Nieuwmeijer, 1992, pp. 81-85) listed a number of channels whereby non-verbal communication can be done: “paralinguistic behaviour” (for instance a silence or speech volume and temp), “microfacial expressions”, “body movements”, “visual non verbal behaviour (for instance pupil responses)”, “speech volume and tempo”, some of which can be somehow controlled, but which are most of the time unconscious. Though diplomatic signalling is somehow “stylized” (Langholtz & Stout, 2004, p. 258), and even though non verbal indices can be learned to be interpreted, there is no iron-clad rule to do so. Johnson pointed out that “[m]any of the messages exchanged during negotiations are non-verbal, and the ability to make an accurate analysis adds to overall negotiating ability” (Johnson, 1993, p. 127). Correspondence based judgments are therefore at work here: it is all about identifying and interpreting multiple fallible indicators coming from the negotiation counterpart. They are fallible because they may have a meaning different from what is interpreted, purposefully (decoy or trap) or not (lack of cognitive control).

The following chart presents a selection of illustrative quotes from respondents in accordance with the nature of the indicator they used in the task of sizing up the dynamics of a negotiation or the negotiation counterpart. The chart divides up the quotes between references to “non-verbal” elements (such as nodding, behaviour etc.) and references to “verbal indicators”. A third column mentions the quotes referring to both aspects.

This chart is provided to demonstrate and emphasise the rich variety of indicators used by respondents in such a task. In the SJT approach, such a use points to a correspondence cognitive strategy, respondents aiming at making accurate judgments by the use of multiple, fallible indicators. It is argued that their use was mostly unconscious at the time of reception and interpretation, because of their being based on innate perception abilities. This indicates an intuitive cognitive mode.

Chart 7 Signals and indicators used by respondents to assess the dynamics of a negotiation or for sizing up the negotiation partner

Note: "R1" stands for "Respondent 1"

Use of non verbal indicators	Use of verbal indicators	Use of mixed indicators
"my Dutch colleague nodded, we have an answer (...) then I saw [name] standing up, as if saying "hey don't do that" (R1)	"If in coreper someone says "my instructions are", it means "I am not in agreement" (R1)	"The first thing is you know from the attitude and from the welcoming remark, from the opening, whether they have decided, the way they have decided it to be" (R18)
<p>"It was a visual thing, that they wanted to advance but they kept on looking at their legal side team, and they kept on the legal team as if they wanted permission" (R 1)</p> <p>- "they would still give certain non verbal signals , which is to say: "hmm, not quite right", I mean, the body language would say" (R3)</p> <p>- "you could feel the frustration on their side , that they wanted to do something, and you could see that from the body language" (R3)</p> <p>"When the hands are coming out like this [gesture], when the hands are almost like offering and the mouth is saying something else, and the eyes are saying something else, the eyes are saying: I am willing, I am willing to go, but the head movement beside with the lawyers are saying I am constrained by [inaudible]. This is what one could see".(R3)</p>	<p>- "It is slightly physical: if someone reads instead of talking, this indicates that he is on instructions, that is not really convinced of what he is reading out (...) if he is really convinced, he 'll simply say "we believe that , think that my government believe that" (R1)</p>	<p>"It's the attitude, you realize that there is a new attitude." (R12) "When I said attitude, this was precisely the non verbal language, you see it the way the people stand, the way...the people speaks, that...there is a change" (R12)</p>
-"and I looked at him and he looked at me and he nodded and then I waited where I	- "One thing is the immediacy of the response" (R5)	"there was not only the verbal communication but also the

was,"(R11).		non-verbal" (R19)
- "It is quite frequent [using verbal and non verbal signals]. Being in a group of people who know each other very well, if you see somebody starting up signalling you being to think what mistake have I done." (R1)	- "or the tone in which the response is given," (R5)	
-"In a relatively close well knit group like the coreper (...), you get to know each other very well and to understand signals and quite a lot has been transmitted without it being expressed in words" (R1)	-"I also pay a lot of attention to what is non said. Because [...] it also gives indications" (R12) - "Then with their argumentation you realize where are the loopholes, so to me the non said gives a lot of information " (R12)	
-" I felt a kind of atmosphere of frankness" (R4)	"because he stopped at certain moment when he was thinking." (R19)	
- "you know, you sense these things, it's difficult to give any physical indicators or objective markers for things . You have to watch them, you have to watch them when you are speaking, you have to watch them when they are speaking of course, but you also have to watch very carefully when you or your side is speaking, and, and, watch not only the main players because they generally tend to know they are being looked at, but you look at, I look at the sides and at the back as well to see how everybody else is taking it." (R5)	"if you take a rather more formal style also and speak on a relatively neutral tone, perhaps indicating you are not quite really convinced" (R18)	
"I would say I was more tipped off by the non-verbal behavioral clues and also positioning clues, the dance that took place around the laptop, than by some keys that suddenly woke me up and "ah, he's mentioning [word]". I was more tipped off	"they went through the text, not methodically but picking out bits here and there and tacitly we assumed, ..., and rightly so afterwards, [...] that what they did not mention was not	

by the way people behaved.” (R14)	important" (R5)	
"it's really the attitude" (R21)	«It's interesting when there are a lot of points, to see where THEY placed the stress as well." (R5)	
«At that time, you can see their glance, in the gestures, in the non-verbal, the agreement to the way to proceed." (R19)	"I become aware because the negotiator is using irony" (R9)	
"There was the reservation and majesty of the person."(R9)		
- “And you could see almost physically how...how much it costs, how much pain it was for them” (R7)		
- “it was the physical expression, the faces, but also the way they were communicating among themselves” (R7)		

Conclusion

In their carrying out such a task, respondents pointed to the use of a rich range of verbal and non verbal indicators to help them figure out the interests, motivations or mood of the other negotiators, as well as the dynamic at work during the negotiation.

It is contended here that such a use points to weaker cognitive modes, since there is no established rule to interpret them accurately. In any case, such a rule or analytical method has never been mentioned by any respondents. It is suggested that in such a task, respondents were using their perceptual cognition, that is, weak cognitive processes, leaning towards intuition. Moreover, interviews pointed to the wide and common use of picking up such signals during negotiations.

Even though the decoding of non-verbal signals can be learned to a certain extent (for instance (Argyle, 1986; Ekman, 2007), it is contended, with Brunswik, Hammond and others, that human perception may be naturally rather accurate in interpreting intuitively such

signals. Last but not least, it is argued that the lack of time and the number of non-verbal as well as verbal cues in the negotiation environment may make the use of analysis inadequate. Moreover, to our knowledge, the dominant negotiation paradigm does not say much, if anything, on what cognitive mode to be used by negotiators. Indeed, its consideration of the social interaction side is usually limited to dealing with cognitive biases, emotions and communication.

2. Cognitive processes under uncertainty

As indicated in the literature review, the SJT model suggests that uncertainty induces weaker, quasirational or intuitive, cognitive modes, depending on the task environment.

The data from the interviews indicate that the negotiation tasks of making trade-offs/concessions as well as making package deals may have induced intuitive cognitive processes in our respondents.

2.1. Trade-offs/concessions and package deals.

2.1.1. Trade-offs/concessions.

Respondent 1 pointed to the subjective nature of the task of making a negotiation trade off:

"It is difficult. Positions are never absolutely equal. I had **the feeling, the impression, or conviction that some issues were more important than others.** [...] **This feeling, I think a negotiator needs to have to begin with**" (my emphasis)

When asked how respondent 15 objectivized the sometimes very different trade-offs in building up a package, he replied:

"It's very difficult and sometimes it's impossible. Because indeed you don't have the same elements of objectivity in the field of [...] agricultural products which you can measure more or less, how many are flowing over the borders, but in some other fields, for instance [type of services] you cannot measure them through the borders because there are no statistics, there are different modes for providing some services, and **I 'm afraid that very often this is difficult to objectivise them so much.** So then you try to objectivise the perception of the

concessions you have done, [...], maybe we objectivise the score we are marking in the negotiation but we don't...**in many instances I'm afraid we don't objectivise the real...impact on the market or economic dimension of some of the concession which are given away."**

To Respondent 7,

"It is a mixture of intuition and of wish to pragmatically advance"

Respondent 17 clarified the precise task circumstances which made him take a decision on trade off:

"Well, it was a short decision time and I was thinking that we were... we had been keeping our orthodoxy for many, many years and it had led to nothing at all. Here we had an opportunity to move the other parties by giving up some of the...purity of our position, so I gave the instruction to get the agreement.

Interviewer:"It came very rapidly to your mind?"

Yes, it came in about half a minute.

Interviewer: "How did you feel it? Was there a clear reason? Was it your intuition, your experience, your whatever?"

"That's maybe more intuition, of course with a little risk assessment, how my principals, whom I could not contact at that time, how will they react"

It is suggested that weaker cognitive modes were used by these respondent, including as a hypothesis making device ("This feeling, I think, a negotiator needs to have to begin with"). Respondent 15's acknowledgement of the non objectivisation of the concessions gives empirical support to political scientist Winham's claim that negotiators in complex negotiation are usually more concerned by the "management of the negotiation situation than [by] a careful calculation of benefits from any particular exchange" (Winham, 1981, p. 874). In the task of making trade-offs, though it may be useful to use objective justification criteria, as the dominant negotiation paradigm suggests (Fisher & Ury, 1981; Lempereur & Colson, 2010), respondent 15's datasand Winham's above claim support the view that, in complex negotiations, the task of evaluating concessions induces intuitive cognitive processes, and that an intuitive response may be adequate.

2.1.2. Package deals

A package deal can be defined as “a particular combination of options that has been selected across several or all negotiated issues” (Cavanha, 2009, p. 55). Such options are said to usually come “bottom up”, by accumulation during the negotiation process (Winham, 1979, p. 9). It is a key element and a standard practice in complex negotiations (for instance, Malhotra & Bazerman, 2008).

The bottom up approach was indeed described so by Respondent 25:

“The positive element that we pursue in changing that specific part, as part of the whole package. This was a part that there was... was a lot of resistance not only from the director, but I also knew [...] from the people. **And you could see that build up, at that moment it was not explicit, but you could feel it that something was going to build up there**”.

This extract highlights the way in which the negotiator sensed the impending build up moment of the compromise into a package, as well as to the tacit nature of the process.

When asked where this package deal was emerging from, Respondent 25 said:

“What is happening is a kind of brainstorming, a kind of brainstorming with no conclusion, where some people give their argument pro and con. “

Previous research has shown that such moments of creativity (for instance through brainstorming) are conducive to building up the package (Winham, 1977 (a); Lempereur & Colson, 2010; De Pauw, et al., 2011). On the basis of the SJT framework, the above data suggest that creativity is a task which induces weak or very weak cognitive modes, because the process of creativity is usually covert, that is unconscious, and very difficult to report about.

Respondent 15 interpreted this stage as highly subjective, with the same limited objectivisation process he mentioned for evaluating concessions being at work for the final deal.

His response pointed to very weak cognitive processes, and to a task environment where the lack of time prevents any analytical calculation of the final deal:

“I’m afraid that when you reach the very, very final stage of a negotiation, it’s very difficult to objectivise the final deal, and what matters is more the willingness to conclude [...] which means giving final concessions on specific issues, and I suspect, but it’s more a perception, that, in the end of the day, it’s very much the kind of give and take like you do in the souk [...] but often there is no time to reassess whether the concessions are of mutual importance or of mutual weight and economical impact.”

Once the package is building up, negotiators have different methods to assess it. Respondent 13 had a special way:

“there I’m more or less on my own, thinking through where we are, [...] it’s either mentally or I may have a little drawing in front of me, ... I like to use drawings, with the different bits ... to see how they fit together , the trade-offs on several trends that help see where you are”

Interviewer: “When you were thinking through, how did you do it?”

“That’s up here [shows his head], and if you are in the end of a negotiation as the one I’m thinking of, which went on for 2 years, where you had been drafting lots of notes, of analyses, discussing red lines, what to give, what to obtain, oral discussions with peers, so you’re very well aware of these strands and it’s pretty easy, I would say, to then conclude: “well that’s it, that’s worth the deal, not work pushing any further , what we have is worth it, let’s go for that” and to recommend to my hierarchy : “let’s go for that”. “

Interviewer: “And when you’re drawing, at that particular moment, what are you drawing?”

“[...] maybe a set of....of.... I use different things and I don’t remember how I did it then, it may circles with words in them, it may be a table that is called “give & take”, ...it could also be called "what’s in it for us, what’s in it... what could we still give”, to go through very analytical, to go through what can we give, that’s the minimum we need, [...]. And then you see, well, we have...that now covers what we need...that flies...”

This extract suggests the use of a very weak cognitive process at such a critical moment. The use of drawings suggests an attempt at moving cognition from intuition towards the analytical pole, by making more explicit the weaker cognitive mode upon which the decision may be taken. It is suggested that this extract may be showing a case of a cognitive change through a change of task (by using drawings).

In the same line, Respondent 27, a senior and seasoned negotiator, pointed to very weak cognitive processes in the way a final package deal may be brokered

“On the basis of statistics, of what we know about the Member States... yes, but **that’s “hmmm”** [expressing something which is imponderable] [...] yes, it’s experience [...] but how [it is done] I don’t know”.

This paraverbal expression was, in the context of the interview, interpreted as a key moment expressing the tacit nature of the knowledge of this matter by the respondent, as well as an indicator of the importance of weak, experience-based cognitive processes (probably of a weak quasirational nature). This expression is related to what other negotiators called “intuition”, “experience”, “Fingerspitzengefühl¹” or “being on your own”.

In this respect, the following quote from Respondent 26 is very interesting on two counts: first because it alludes to the cognitive discrepancy between the espoused theory and the theory in use (which will be dealt with in section 4), second because it sheds a rather clear light on the nature of the cognitive processes at work. For the same reason stated above, he will be quoted at full length here. When asked what elements of the whole negotiation carried the day when he took a decision on a negotiation package, he replied:

“It’s Logic, you’re looking at the pieces on the table, and you have to work out how can I get the best result out of all this. If I give this, can these other things fall into my hand? And these are generally things that are important or equally important so that at least I can present to my stakeholders that I haven’t been able to deliver fully on x but I have been able to deliver on these crucial issues a, b, c. **but it’s also the balance, you’re looking at the balance of the whole thing:** if you give away some very important thing, and you only get back some concessions on statistical cooperation or something like that, you know, **it**

¹ German equivalent of "intuition"

doesn't look very good so in looking at the whole package you are also thinking about a **balance**: am I getting in terms of worth... weight, am I getting ... an equivalent amount, at least an equivalent amount of what I am giving away?"

Interviewer: "When you are doing just that, how are you doing that? Is it experience?"

"From a personal perspective, the way I work is...you have to, first of all, **master the file**, you have to know the issues at stake, and you'll have had preparatory meetings [...], and then I think it's important ... you'll generally then have... **an idea form in your own mind about how you would want to play it, but you'd generally discuss that at least with your team**, not too many people [...]. So again... a lot of...a lot of... I would say.... **consultation**, I don't mean in term of a committee but a lot of talking it through with...a few individuals who are very near the negotiation **but at the end of the day it has to be your own ...it has to be you who has to play the card**".

So, here, respondent 26 started by putting forward coherence ("it's logic"), which is exemplified further by mentioning the puzzle analogy ("looking at the pieces on the table") as well as the need to have an equilibrium ("balance", a term which is repeated three times in this passage). The latter is reached by a kind of rule of thumb: the outcome of the exchange of concessions "should look good". Such a "visual" rule of thumb refers to perceptual cues, considered holistically, as a pattern, which is a strong indicator of an intuitive cognitive process (Margolis, 1987; Hammond, 1996), which Hammond considers as searching for coherence (Hammond, 1996, Hammond, 2007). It is argued, and assumed, here that the latter expression is not just an image but that it actually reflects how the Respondent carried out the task he described. The rest of the passage may well confirm this assumption: first of all, Respondent 26 pointed to the internal consultation process and mentioned insight ("an idea form in your own mind"). It is contended here that, even though the internal consultation may have been about a real organizational and personal need (to cover his responsibilities), it can also be interpreted as an indicator that the negotiation package decision is based on weak cognitive processes, and the latter needed peer-aided consultation for validation (Hammond 2000). It is also interesting to note that, on the basis of the Respondent's responses of course, the search for a coherent judgment apparently took precedence over an accurate one: logic

and coherence are put forward. Hypothetically, this could be explained by the specific legal and bureaucratic environments the respondent was in.

It is perhaps worth exploring this concept of "rule of thumb" in more details. Rules of thumb are described as "simple decision models that people use" (Katsikopoulos, 2011, p. 11) and are a common synonym of the more scientific term "heuristic". André et al define them the following way: "[...] called heuristics in cognitive psychology, [they] are used in more automatic mental processes and are described as mental shortcuts that lessen mental strain. Heuristics are considered useful and even necessary shortcuts, guiding search and choice in uncertainty and under time constraint" (André, et al., 2003, p. 514). They are widely used by everyone in daily as well as in professional life, including in medicine (for instance André et al, 2003). Given their intimate link with experience, it could be argued that such rules of thumb point to weaker cognitive processes in particular towards a quasirational rather than intuitive type (André et al., 2003). It is therefore not surprising to learn that some respondents acknowledged their use. Here are just a couple of examples. Respondent 1 was clearer about rules of thumb, which he used in the (many) cases where he lacked clear negotiation instructions:

"You have a certain number of general guidelines: we favour European integration, you should avoid a treaty failure, you don't go into a dead-end, I would also be attentive to what the [countries] were thinking; for instance... if the Germans had a clear position on a point where we had no clear position my instinct would be to support the [country nationals] because quid pro quo, they might do that next time. So you have a certain number of guidelines ... in Maastricht, I needed that sort of things because I didn't get many, many concrete instructions".

Respondent 12 put forward another, negative rule of thumb, avoiding failure per se:

"You don't want to come out of this negotiation by being blamed that everything went down the drain **because of you**, so that required to have this delay"

Respondent 13 also acknowledged that, and explained where they came from:

"At that time... I would say I don't think too much except **the maxims of: "don't accept this because you are not sure", "ask more to understand better", ...**

“don’t accuse, unless you really know it and are sure because this may spoil the atmosphere” ,”remain friendly”, “ask neutral questions”, “don’t attack for cheating because it may really spoil the atmosphere for ever”...”let the numbers play out and let the other see that something is maybe wrong” to avoid a loss of face of the other side, so that’s all coming through at this moment...”.

Interviewer: “you are using kind of rules of thumb?”

“Yes, absolutely”

Interviewer: “did they come naturally or otherwise?”

“I would say that quite a bit of this would be naturally coming, **out of a gut feeling of what’s the right behavior there**, and that may be part of my personality”.

Respondent 27 acknowledged explicitly the role of intuition:

“So we make a balance, and not necessarily, because of these political links, not giving a lot attention to them, because it’s not him the negotiator and therefore one tries to put balance all this”.

Interviewer: “And when you balance all this, how do you do it?”

“That’s intuitive”.

Interviewer: “It’s intuitive, what do you mean?”

“Yes, I mean, from all these elements, it is the habit of that kind of negotiations... one almost deduce the way forward”.

This appeal to “feeling” is very similar to what we have already investigated above, in perceiving the dynamics of a negotiation. Here respondents are very clear about what is at work. Said Respondent 19:

“It is also the capacity to improvise which, at certain moments, plays a role. One feels the discussion [...], there one says to oneself: “here is a negotiation that I feel well”.

Hindrix et al, contended that "[t]here is a lack of tools and methods that facilitate a precise analysis of the negotiation dynamics" (Hindriks, et al., 2007). There is no explicit formula nor method to carry this out, other than, perhaps, a rule of thumb, which can be used on the spot, for instance, trying to "enlarge the pie", by adding issues into the deal to increase the possibilities of mutual compromises. Spector pointed out in his qualitative study with diplomats that such package deals were often referred back to headquarters for comprehensive analysis (Spector, 1997). On the other hand, studies of complex international negotiations also showed that the very complexity of the substance and of the process defies imagination, to the point that a senior negotiator in the Kennedy Round summed it this way: "in the end, you just take the best guess" (Winham, 1977 (a), p. 109).

Such a tremendous complexity is what Respondent 15 alluded to:

"Honestly there are some moments where people were losing track of what had been agreed, especially when it comes to late hours of the night or early mornings, and at 2 or 3 o'clock in the morning, the only objective is to strike a deal! **And I witnessed some deals which were agreed but nobody knew exactly what was agreed.** And I suspect that sometimes it's partially on purpose, because if you re-try to clarify again what [country] meant on article 15, what's the precise wording of the concession granted to [country] on article 20, you risk to reopen the discussion, so **I witnessed at least one or two deals which were not clear to many participants,** and then you have to clarify it afterwards". (My emphasis)

Conclusions

With all these rich descriptions, it appears that making a trade off may principally induce intuitive cognition. Indeed, there are no known rules determining what a good trade off is (George, 2001p. 24). Even though some calculations or economic models can be made, the final decision, given the complexity and uncertainty associated with models and statistics, can only be a matter of judgment, and therefore of weaker cognitive modes. Such a suggestion supports Winham's work on concessions in international trade negotiations (Winham, 1977 (a), p. 356). He found in simulation exercises with American diplomats that the use of quantitative methods to conclude negotiations were mostly discarded, for lack of time and "because the methods produced results that were too precise for the needs of

the moment" (Winham, 1977 (b), p. 109). He concluded that a negotiation "is primarily an exercise in creative problem solving, where educated political guesswork is more important than shrewd calculation of advantage" (Winham, 1977 (b), p. 109). It is argued that such an educated political guesswork can be translated as indicating weak, possibly intuitive, cognitive processes.

As a consequence, the findings suggest a possible challenge to the assumptions and prescriptions of the dominant negotiation research paradigms whereby the analytical mode should be used for all tasks. Even if more time were allotted, it is dubious that analysis could be applied here, since there is no known rule to do so. Alternatively, analysis could be used as a post hoc rationalisation or justification for one's stakeholders or management. However it is argued that the analytical mode used would have only a limited connection with the actual cognitive mode used to make the trade-off.

2.2. "The right moment"

As seasoned negotiator practitioner and scholar Guy-Olivier Faure noted, "Negotiators [...] have to perceive what might be an effective compromise, [and] **propose it at exactly the right moment**" (Faure, 2003, p. 8) (my emphasis). It is therefore expected that our respondents would also confront such concerns of timing in their work. However, if it is often mentioned, very little research has been done from a cognitive perspective, that is, by investigating about the actual cognitive processes at work in such critical moments, except by just mentioning it *en passant* (Thuysbaert, 2006, p. 217; Benoliel & Hua, 2009).

Respondent 6 described the "right moment" the following way:

"[T]here's **this magic moment** in a negotiation where you suddenly realize that it's gonna work, and in this one, **we [had] a feeling for it**" (my emphasis).

Respondent 12 was very clear about that:

"If you have 4-hour sessions, in these 4 hours, **the critical moment when things would be de-blocked and you would make progress, are very limited to maybe 5 or 10 minutes**. And you should not miss these ones because this is when everything is taking place. All the other, I would not say they are useless, but they could have been done by exchange of information, letters, emails".

Respondent 2 spotted such a decisive moment in a negotiation. Here is his description:

“I felt it is the decisive moment, we still need some time, the problem is not resolved and if you put something on the table, it’s gonna fail, and to crash . And the question is how to avoid such a situation? We need to find a way to gain time”.

Question: how did you decide about the necessity to delay?

“There is no instruction at the moment. The question is that **you need to assess the situation**, you need to say: ok what is necessary in this moment? And then, keeping your objectives in mind, that you don’t want to come out of this negotiation by being blamed that everything went down the drain because of you, so that required to have this delay, because some decision had to be taken among EU Member States before we were ready to have the co-president puts something on the table, so that we were able to respond to that.” (My emphasis)

Respondent 6 pointed to a case where he felt something wrong:

“It was a feeling we weren’t ready, it was a **STRONG** feeling [respondent's emphasis], because, ..., in my experiences in terms of the quality of the product, you need to have good preparation.”

Respondent 25 had a similar experience:

“Well the only example I can think of is where I refused to negotiate... where I felt so uncomfortable, **I really felt so uncomfortable that I didn’t even want to start to negotiate.** [...] **Is that a gut feeling? Yes, I think so.** [...]. **I checked after my feeling**, [laughter] to say: ok this would not have been a good moment to start a negotiation, and I checked that and I said: yes, you did well in not negotiating.” (My emphasis)

Again, such situations challenge the conventional view of the dominant approaches in negotiation. There are no known rules -and it may well be simply impossible- to determine analytically what a right moment is and when it arises. Intuitive cognition may not be perfect but apparently served well those who used it. Moreover, such a yielding to intuition in such circumstances finds empirical and theoretical support in the SJT.

2.3. Facing the unexpected.

Facing the unexpected is an inherent part of life, including in negotiation. This can take various forms: for instance, documents gone missing, engineered ploy or outburst by a party, discovery of a new fact, the replacement of a lead negotiator, or a sudden political change. Even in very formal(ised) negotiations, such as those in multilateral for a (such as the UN, the WTO and the EU), the unexpected, by definition, can arise anytime. And yet, decision-makers, and negotiators in particular, have to face it.

Respondent 13 told of his experience with an event for which he was unprepared:

“The counterpart pulls out numbers that we have never seen, which appear wrong but we don’t know, says things that don’t sound right but we don’t know, because we haven’t checked, because they are new”.

When asked how he spotted that it was a potentially inaccurate piece of information, he replied:

“Preparation, preparation, preparation! **Because it doesn’t fit.** It was not the body language, **it was really the numbers didn’t look right. They didn’t fit together, somehow**” (my emphasis).

It is suggested here that Respondent 13 was making here a reference to an intuitive search for coherence (Margolis, 1987; Hammond, 2007). The intuitive aspect was confirmed when he was asked what he perceived when he saw these “strange numbers”:

“**More a...detective feeling**, in the sense that...something isn’t, **something may not be right, “dig down, dig into this”**, to check whether this can be right or not... not necessarily... anger, or [...] this kind of feeling that they are trying to play tricks, that not, rather: “watch out, there is something that may be wrong, so don’t accept...say this has to be checked, ...certainly don’t accept, do nothing that could be used by the other side as having accepted, facts or things that could later be used against you” (my emphasis).

The extract suggests that Respondent 13 was making reference to a very weak cognitive mode (“detective feeling”), located towards the intuitive end of the cognitive continuum. He defined such a detective feeling the following way:

“it’s not necessarily negative, it’s more: “I have discovered something”, on balance I sense more the thing: “Uh, here’s something I need to check, I have *seen* [emphasis] something” weighting more heavily than “oh, oh, I may have a cheat in front of me”, [...] with me, I would say, this is the stronger feeling, because you have mixed feelings, but the stronger feeling is: “uh, here I found someone, that’s worth looking into, normally I then know in the end this will be the other side’s negotiator’s position, if he discover someone is trying to play games with numbers or whatever”

When asked where such a feeling came from, he replied:

“I would say that quite a bit of this would be naturally coming, out of a **gut feeling** of what’s the right behavior there,”

Moreover, he mentioned emphatically the origin of such a cognitive mode: preparation. It is suggested to interpret as “tacit knowledge”, for two reasons. First, the amount of information which had to be absorbed on a rather lengthy period; and second, the fact that he and his team members are not referring to making a full calculation of these new figures but only have a quick look and make a mental comparison of the coherence of what is offered with what they memorized:

“from preparation, I knew more or less what numbers should have been there, and [...] I am normally able in the negotiation room to actually mentally step a bit back and actually look at what is on the table, and compare , you know, so both with numbers and with texts, and **quickly go through it to see: can this be right?** What does it mean?”

He added:

“I find it usually very important and helpful to have done the preparation for the negotiation. Because it allows you to... to check and cross check certain things much more quickly.”

Interestingly, he used that as a warning and as a way to generate hypotheses:

“so the immediate caution and a **deep curiosity to get into this,** ... using then a technique of **asking questions, how numbers fit together,** how they were built

up , to see more detailed calculations, just probing questions, remaining neutral” (my emphasis).

This echoes Atkinson and Claxton’s suggestion whereby intuition can also be seen as hypothesis-generating mechanism (Atkinson & Claxton, 2000).

2.4. Political justifications may induce weaker cognitive modes

Many respondents emphasized the political nature of the negotiation process and noted the need for a political judgment (for instance, respondents 1, 2, 3, 4, 7, 8, 12, 25). Said respondent 12:

“Usually what happens is that a political decision has been taken on this, [...] it sets a new landscape in your negotiation, [...]. In my mind, there cannot be negotiations that are purely technical, because you need to make arbitrage and this is not technical”.

Respondent 1 recalled how he explained to his ministerial principal a concrete proposal he had negotiated:

“[their decision are based on] the political issues, they mostly will not know, with exceptions, the details of the negotiations. Your ability is to say, “Mr. Minister, we have an issue there, and the problem is this, and the alternative is that”, **without going into the details** but understanding, **he should understand what the political issue** is at stake (...) but you must be able **to paint them the balance** (...) in the proposal on the table, **my feeling** is that going towards in the sense of financial restriction I **would guess** our advantage is to give a little more on such and such, (...) when you were negotiating on concrete sums, and you have to know, to **reconcile the general feeling** , we don’t give out too much money [...] **There is an element of balance.**”

Respondent 11, as a senior manager, took himself a decision on such a balanced basis:

“It was a political decision, (...) the decision I took was the one that was **closer to our own internal ...discussions, and the one that would create less problems...** internal EU without creating more problems outside. Now it is true that the one...the other position would be a little bit more radical ...I might at

first defend...tempted to test this but at that moment, **taking the whole debate into account, I felt we didn't need another... problem** and especially on issues that we haven't discussed with the Member States beforehand in some detail."

Respondent 8 called upon some more imagery to describe the situation:

"The landscape is that, everything that is involved in this, and again it's an element of **feeling comfortable**. You have to be comfortable about what you are negotiating, so that there is not an area which can pop up during the conversation. [...] **it's very important that you have a good view of the landscape, but the landscape also means what's very important and what is not so important, the big trees and the small trees.** "

The above descriptions tend to give linguistic indicators of a quasirational or intuitive cognitive activity: "paint the balance", "element of balance", "understand what the political issue is at stake", "feeling", "reconcile the feelings", "taking the whole debate into account", "the landscape", "feeling comfortable", "a good view of the landscape". Such turns of phrase do not suggest a strictly objective, calculative rationale.

Such a political justification is one of the differences between Hammond and the Dreyfuses, which was outlined in the literature review. For the latter, the use of intuition is the hallmark of the higher levels in and of itself. For the former, intuition is a cognitive response to a task which induces it, irrespective of the level of responsibility. What the interviews suggest is that higher level individuals may decide by using weaker cognitive modes, but it is argued here that this would be due only incidentally to their senior level. It is suggested that this is due to the fact that they are the place of final arbitration and, as such, they are facing a level of information which is paradoxically higher but also thinner, that is, the decision-makers benefit from a wider array of information sources but, because of their workload, sources which are sometimes extremely simplified to help them manage their cognitive overload. This can cause considerable difficulty in terms of linking the issues to their reality (Hammond, 2010) and thereby induce them to use their cognitive mode of last resort: their intuitive, coherence-based judgment.

In addition, the verbal form of the task may well induce decision-makers towards weaker cognitive modes. When asked how the debriefing was done at the political level, Respondent 1 pointed out:

“Mostly oral; most politicians don’t see their dossiers [...] the most important thing is oral, verbal”.

Such an oral debriefing would induce weaker cognitive modes since it would be nearly impossible for the hearer to memorize everything which is said and where necessary to come back on it for further reflection. The hearer may tend to focus on some outstanding elements, possibly with a greater emotional impact, including political ones. In such a situation, the decision-maker will have even more difficulties focusing on the correspondence of what is being said with reality, and will therefore be cognitively induced to move to a coherence strategy, which is possibly served by an intuitive cognition, based on a call to broad political concepts (Hammond, 2007). Yet, it will not be completely intuitive, at least in the cases where the decision-maker has the obligation to discuss the matter with peers and or other political authorities (for instance Parliament). In such a case, the cognitive process will move from pure intuition towards quasirationality. Indeed, as Hammond and Brehmer commented: "Policy-formation concerning international affairs will not be purely intuitive because it will be driven towards explicitness and coherence by analysis and criticism. (...) Argument will drive out intuition- to a point (...) for policy-formation will not be perfectly analytical either. There are no established scientific rules by which information can be organized and integrated. That process must be a matter of judgment. (...) policy-formation must be quasirational because of the form and materials of the task" (Hammond & Brehmer, 1974, pp. 341-342). They gave the following sobering conclusion: "as a consequence of its quasirational nature, policy-formation cannot be perfectly understood by anyone (...) yet statesmen are forced to believe that such policies can be perfectly understood" (Hammond & Brehmer, 1974, p. 343).

Conclusions

The dominant negotiation paradigm, best represented by Harvard Business School negotiation scholars Malhotra and Bazerman, claims that "too many people [...] rely on their gut instinct or intuition as they negotiate", and confidently prescribe that "[their] framework will help [them] minimize their reliance on intuition" (Malhotra & Bazerman, 2008, p. 5). In

addition, Bazerman and Neale, in their chapter on thinking rationally about negotiation, state confidently that the latter tells the way "[people] *should* make decisions in a world where many people don't always behave rationally" (Bazerman & Neale, 1993, p. 67). In the same time, Bazerman and Neale are, to our knowledge, the only authors in negotiation who called for the need to take into account the cognition of the other negotiator (Bazerman & Neale, 1991). But they understood it rather strictly, as taking into account "the contingent decision processes of competitive others" (Bazerman & Neale, 1991, p. 112), that is, the other factors affecting the decision of the other negotiator. Of course, Malhotra and Bazerman readily accepted that busy negotiators may not have the time for using what they call "system 2" (analysis), and therefore prescribe that negotiators identify the tasks leading to weaker cognitive modes and try changing the task form, for instance in "avoiding negotiating under time pressure", or "partition the negotiation across multiple sessions (Malhotra & Bazerman, 2008, pp. 141-143). This looks like a good piece of advice but one can wonder whether this is sound and applicable in the real world of negotiations. The two writers acknowledge that "too often, executives who attend negotiation courses (or read negotiation books) discover interesting ideas, but do not actually change their behaviour" (Malhotra & Bazerman, 2008). It is contended that this happens because what is taught are indeed good ideas in theory, but which do not take into account the situation encountered by the negotiators.

In stark contrast to this, and in resonance with the SJT model, the interview findings presented here suggest that the use of intuitive modes is induced by the nature of the task at hand. In particular, uncertainty induces cognition towards weaker, possibly intuitive cognitive modes (Brunswik, 1956; Hammond, 1996; Hammond, 2000).

The interview findings presented here suggest that several critical "uncertainty-gear" (to use Brunswik's terminology) negotiation tasks, such as sizing up another negotiator or dealing with trade-offs and package deals, cannot be carried out, on the basis of current knowledge and given the time frame in which most negotiators are, by using an analytical mode: analytical tools to decide on the spot on a dilemma, a trade off, particularly between values or political principles, simply do not exist or cannot be used by negotiators in the available time frame.

In other words, the findings suggest that the use of weaker cognitive modes by negotiators is not principally due to an intellectual laziness or to cognitive biases, as suggested by the

dominant negotiation research paradigm, though this may be the case, but to a normal cognitive response to an intuition-inducing negotiation task.

Moreover, in terms of the efficiency of such a cognitive mode, an issue to be left to further research, it is interesting to note that Brunswik contended as early as 1937 that “[p]sychology deals with the abilities of organisms to establish intercourse in a successful way with the surrounding world, in reception (cognition) as well as in action” (Brunswik, 1937, p. 235). If one accepts the adaptive value of intuition and quasi-rationality, based in earlier Brunswik’s insights (Hammond, 1980, p. 17; Hammond, 2010, p. 37), Hammond’s contention that the SJT is a domain independent theory (Hammond, 2007, p. 42), and the conclusions of Hammond et al. ’s experiment (Hammond, et al., 1983; Hammond, et al., 1984), it is also contended that such a cognitive response may be more adequate, that is a task which is not only adapted to the task but also offering more chances of success, than the use of a more analytical cognition.

Last but not least, it is also contended that the SJT model can help negotiators identify the task environment inducing weaker cognitive mode, give them a better understand and possibly confidence in dealing with them and/or means to change the task form to induce their cognition or that of the other negotiators to another mode.

Section 3 Quasirationality-inducing tasks

1. Preparing negotiations.

1.1. Preparation and analysis

This phase is overwhelmingly considered in the literature as essential for the success of any negotiation (Fisher & Ury, 1981; Kennedy, 1998; Mnookin, et al., 2000; Lewicki, et al., 2009; Lempereur & Colson, 2010). At the same time, negotiation research has, for the most part seemingly, fairly overlooked the *actual* preparation practices with the notable exception of a 1997 special issue of "Theory and Decision" (Volume 34, Issue 3, May 1993) and of Spector (Spector, 1997).

In this section, there will be an investigation of the methods used by Respondents in the preparation process, including the sorting out of the different issues' respective importance.

It is argued that such an investigation will shed light on the cognitive modes actually used (as opposed to those prescribed by negotiation theory) by negotiators. The outcome may inform the training side of this research by pointing to the cognitive and epistemological values of the different methods used to prepare negotiations. It is claimed that this is an aspect that mainstream negotiation theory has not taken into account, neither descriptively or prescriptively.

Hammond noted that the mode of presentation of information had an impact on the cognitive mode (Hammond, 2010). In particular, texts are said to induce an analytical mode (Hammond, 2010, p.84.). As part of the preparation, negotiators usually process a large numbers of documents, from the news to reports, notes, press releases and other political statements, to official letters. Processing such documents usually induce analysis.

However, preparing negotiation goes well beyond reading files. It is a task whose varied characteristics induce the whole range of cognitive modes. At the same time, given the high level of intrinsic uncertainty and limitations associated with the task (Bratianu, et al., 2010, p. 55), it was found, as will be shown in the following paragraphs, that the dominant cognitive mode was rather weak, based on experience and/or intersubjective validation processes.

1.2. Internal consultations and validations

Most if not all respondents mentioned a more or less comprehensive internal consultation process, before the negotiation. Such a consultation involved other departments and/or outside stakeholders, whose formal or informal opinion was sought after. It aims at checking ideas, facts, hypotheses, and possible strategies and solutions with colleagues. From a cognitive viewpoint, the validation of one's own opinions with that of other people is peer-aided cognition, an indicator of a weaker cognitive mode (Margolis, 1987, pp. 78-79;94; Hamm, 1988, p. 87; Hammond, 2000, p. 133;141). More precisely, it indicates that the decision taken by the negotiator was based on a weaker cognitive mode, which required validation through this intersubjective confrontation of intuitions. The latter process induces cognition, by the focus on the justification process, towards quasirationality.

In practice, such a validation takes very different forms, from discussions to brainstorming to monitoring committees. Respondent 10 gave a crisp summary of the validation nature of such an informal consultation process:

“I try to be quite careful about relying only on my own impression and what I would do in order to validate that would be over time to...to...discuss these matters regularly with members of the team and **to brainstorm** a bit with them how do you assess that position, what do you think...this statement means, ...what does it tell us about the...bottom line, what the other side is really hoping, expected to get out of the negotiation, so **it's an accumulation of impressions** but **not of purely personal things**, ...something that is a...**collective effort**, not in a wide group , not in an interservice group, but among 2, 3, 4 closest collaborators ...who form the core of the negotiating team.” (My emphasis)

Respondent 26 pointed out:

“it would be essentially a prolonged brainstorming, because you could assume that people involved know what the official policy is, know what's in our negotiation directives, and we gradually build up a picture of “the enemy”...the constraints on them, where they might be trying to pull from you more”.

Respondent 10 commented:

"[Preparatory discussions] were based on a variety of convergent sources: hearsay from colleagues...my own observation, discussion with colleagues from the DG, ...and so on, so I would say it was well known and solidly based beforehand".

This shows the collective nature of the preparatory process in these organisations, which is apparently a feature, and often an advantage (Respondents 5), notably because it gives a feeling of “safety” (Respondent 7).

Two respondents (respondents 10 & 26) mentioned a very formal preparation approach, called “scoping exercise”. According to Kirkpatrick and George, a scoping exercise is "based on consultation, a review of causal effects, and the evaluation of stakeholder concerns" (Kirkpatrick & George, 2006, p. 329). This means that the exercise is based at least in part on judgments of experts, peers and stakeholders.

However, it is open to question whether or not such broader and explicit consultation processes are offering the level of objectivity that several respondents appeared to attach to them. Indeed, such structured processes bear a strong resemblance to an extended peer-aided process, an exercise that Hammond would classify as inducing quasirational modes.

1.3. Prioritising issues.

Prioritising issues in negotiation is considered a key task in preparing a negotiation (Bazerman & Neale, 1991, p. 133; Raiffa, et al., 2002, p. 215). It helps build one’s case, in that it allows knowing which issues of the negotiation are more important, and thereby allows the negotiators to sort out the issues between those which may not be compromised and those which can be the object of concessions. Raiffa et al. went so far as to suggest several analytical techniques to carry out such a ranking (Raiffa, et al., 2002, p. 213 ff).

In contrast, several respondents pointed, explicitly or implicitly, to weaker cognitive modes, and even to intuitive cognitive processes, based on their tacit knowledge and experience. Respondents 7, 8 and 15 were quite explicit on this aspect. For instance, such a tacit knowledge, made up of "*specific knowledge and intuitive experience*" allowed Respondent 15 to get a rapid access to the memory of the key information of the file to be negotiated:

“It was quite rapid, so it was a mix of acquired knowledge and experience and a few technical informations that were provided to me and...it flowed rather rapidly. At the end, it was largely intuitive but it was based on some hard data, experience and knowledge, I would say.”

Respondent 15 added:

“I did it on the basis of my personal knowledge and experience of [policy field], because I had been in [this DG] for more than 10 years now, I've been working a couple of years, two years, in a [specialised agency], so I hope I have enough...experience and understanding to identify what are the critical pieces of legislation in some areas, and what are more technical and less critical”.

Such a tacit knowledge allowed some respondents to understand immediately what really mattered and the extent to which issues were sensitive or not. Said respondent 22:

"I know by experience and by knowing this house [EU jargon for "this organisation"] what is usually super sensitive, which topic is likely to degenerate in an endless debate at very high level, ... this is more your experience, your knowledge, well knowing what the EU thinking is like, what are the different DG thinkings like, what are the sacred cows for each Commissioner or each DG”.

Respondent 10 pointed to the use of weaker cognitive modes in such a task, based mostly on perceptions and observations, possibly cross checked with colleagues:

" It is based on the observed behaviour of the two DGs in other negotiations, ...and information coming to us from the colleagues about this...people saying:" you know, DG x is always trying to expand its area of responsibility at our expense, and these are some of the...the arguments that have been used”.

It is interesting to note that one of the respondents working in a negotiation field where quantitative elements for preparing and leading negotiations are both critical and available, was using, for this task, weaker cognitive modes. Indeed, when asked about how he did such a task, Respondent 22 emphatically used the economic value of the request as the yardstick to judge the reasonableness of the request(s) of a department, a yardstick which he calls "a reality check". Respondent 22 commented:

"[Reality check?] I am comparing the subjective importance of certain services with the objective argument, how much money are we talking about?"

Yet, when asked more about that, he responded:

"There is just a dispute then on whether this is important or not, which is subjective. Economically [...] there is no dispute on the amount"

So, the respondent apparently used an objective and very analytical approach (the economic value), yet, the whole of the internal negotiation on the ranking of issues revolved about "the subjective importance" of the issues, which induced weaker cognitive processes.

Moreover, respondent 7 mentioned that the lack of explicit guidance, be it from the negotiation literature, or an official document or colleague, as the reason behind the use of such cognitive processes:

"In this, I am very intuitive: I know what I want, and I know what is...I know what the political wish is, ...and.....I try to make that possible , taking into account all the legal, technical constraints. [...] I frankly do not use any guidebook from anybody from anywhere, or academic or internal rules, and frankly there aren't many rules on this, that is, you base yourself on the... on the **empirical evidence of what works and does not work, of colleagues** and you try to make a better product" (My emphasis).

This remark points to quasirational modes, where experience ("empirical evidence") and discussions with colleagues played a key role. Such a conclusion is in line with Winham's claim whereby the ranking of priorities was critical in the negotiation process and was difficult, necessitating "creative hierarchies" (Winham, 1977 (b), p. 103), which, arguably, alludes to non analytical cognitive modes.

On the one hand, Respondent 1 said:

"I can convince my minister or prime minister that this is a reasonable solution [...] if you have reasonable argument, you will be able to convince anybody if seems to you reasonable."

However, Respondent 1 insisted on a specific and crucial element, which we will be dealing with later: his seniority and his long experience in EU negotiations, which earned him the trust of his principals. Said Respondent 1:

"I suppose that there is an element of rationality but there is an element of experience. You would know, you get at the end or through a career, that's why it

is to give that sort of post to people who would grow in the process that you have enough examples in your memory ofsolutions to , that sort of problem”.

Moreover, interestingly, Respondent 1, who emphasized the rational nature of the justification process, also pointed to elements which may well be less "rational":

”if you [the principal] have confidence in the negotiator, you should follow what his instinct and his reason say what is feasible and not feasible”.

Respondent 1 was giving here an interesting description of quasirationality, that is, a mixture of “reason” (analysis) and intuition.

It is argued here that such a statement encapsulates the quasirational cognitive mode at work for the task of sorting out priorities.

This challenges the already mentioned conventional wisdom of negotiation research. Such a task cannot, in spite of existing methodological tools, be resolved adequately by analysis alone. It is argued that experience, and particularly experience of the trade-offs to be done between theoretically possible solutions in the ranking, and the actual necessities of the ground, including the acceptability of the ranking, offers a far better means than analysis.

2. Accepting a deal.

After often long negotiation sessions, with offers and counterproposals, the time to take a decision (accept or turn down the proposal) arrive. In spite of all the available analytical means, intrinsic uncertainty remains present. As a consequence, weaker cognitive modes will be used, where experience plays a role.

Respondent 2 assessed the offer and, being on the ground, thought the deal is was “doable”, whereas his management eventually turned it down.

“I thought the compromise which was on the table was reasonable, in terms of the substance. It was of course going beyond what we had defined as red lines, but still you would think if we get this deal through we get this package done, [...] In terms of the political development, it was a very important point in time: in the [country], you have a [political party name] government[...] next year there will be elections, it will be it more difficult for that government to be more flexible in

its approach, and what you would get in a year's time was unclear [...] It was political and also in substance: in one way, you would say: this is doable”.

The “doability” of a potential deal was referred to by another respondent as its “defendability” (respondent 6). It is suggested that both terms refers to weak quasirational cognitive processes, because experience and tacit knowledge played an important role. Respondent 6 particularly developed this theme, in an interesting manner. For this reason, quotes will be more extensive than usual.

He first laid out his responsibility to have a “defendable” deal:

“It was my job, and it was the job of the lawyers, to be pushing, to adjust the deal so it is defendable.”

The interviewer then asked how he knew that a deal was defendable. Respondent 6 described such a criterion in the following way, welcoming apparently such a question with a visible expression of pleasure:

“Ah?! **You feel you can...**, well, for me, if we get taken before the court, we can win the case. “Defendable” is the right word because it's not...the word doesn't mean “sure”, it means “**adequate**”, it means you could, if you did it, you could **effectively and with a good chance** go into court and come out saying: “yes, we were right”. (My emphasis)

Following a prompt, Respondent 6 further developed what he meant by “adequate”, a word which is referring to implicit knowledge, and experience. The latter are indicators of quasirational cognitive processes, as the following excerpt confirmed:

“[it is adequate] Because we have, it's like you consent form, there are criteria, it was in [field] [...] the criteria are actually very clear, and when you apply them to a specific case, you know, **you can have a feeling**, meaning it takes... I found this in any subject I have done as a lawyer [...] but **it would take up to a year to become confident, you know, to develop a feeling, a gut feeling about something [...] I just knew, I could feel it, that [...] this draft provision, or this one, or what they were going to suggest, it wasn't finished.**” (My emphasis)

Respondent 6 therefore called upon his feeling (including gut feeling) to recognize whether or not a negotiation outcome was “adequate” or “defendable “. At this stage, the cognitive mode could have been interpreted as intuitive. However, the interviewer then asked through a prompt, about the basis of such a judgment. Respondent 6 replied:

“Ah, **yes it was experience**, because it was...I had been doing [legal field] already for a couple of years and maybe I would have been better now after all this time, but, ..., **the feeling it to be defendable is**, you look at all the facts , you know, this information was to counter [crime], serious crime, [...], and we knew from the limited stuff we were getting from [sources] and so on: this stuff is really useful for 6 months, still quite useful for nine months, when you get to a year the returns on it are not great, and the test for [field] is: you can have what you need but no more. And so, what would have been correct, as opposed to defendable, would have been one year, or less, I knew that! That was legally definite, looking at all the stuff. Because the evidence we had didn’t show you anymore. But it is was **defendable because there were still doubts**, you know, you could say: yeah we would still get one person in 100.000 and you are talking about hundreds of thousands of thousands of people [technical explanation], so, I would have been, **I would have felt** that two years would have been quite defendable. I mean the really strict [authorities] were saying 6 months to a year in their opinions so, in my own way of compromising I could have stretched to a year but not to three and half times that long.”

Respondent 6 described a task with a certain degree of uncertainty (“the word doesn’t mean sure”, “there were still doubts”), whose nature is to elicit weaker cognitive modes. Interestingly, in his response, we can spot indeed a few indicators of such weaker cognitive modes: the reference to experience as a basis for judgment, the use of nouns and verbs with a lot of underlying tacit knowledge (“adequate”, “I knew”) , as well as the use words referring to perceptions (“you feel”).

Conclusions

Interviews started with the preparation phase of a negotiation. It was assumed (and later demonstrated) that it would be an easy start for the respondents. From a theoretical perspective, it was anticipated that the preparation stage, even though actual methods used by respondents may have been different, would tend to be characterized by the use of a stronger quasirational or perhaps analytical cognitive mode since time was supposed to be more readily available for such a task. However, as the data suggested, it appeared that even in more formal preparation approaches, respondents used rather weak cognitive modes, of a quasirational nature.

It is worth noting that no respondent ever mentioned the use of instruments and/or methodologies inducing higher, analytical cognition, such as the full use of process techniques and substantive models as developed by methodologists, including for negotiation (Spector, 1997). It ought to be mentioned that the absence of such analytical methods does not mean that they were not used but it is contended that being silent about them can be an indicator of their being seldom used. On such a basis, we can perhaps now consider these preparation approaches from cognitive and epistemological viewpoints. It is contended that the two are interrelated since a weaker cognitive mode associated with a source or approach or methodology will mean a weaker epistemological value of the latter. For instance, hearsay or corridor talks, often mentioned in the interviews, are by nature inducing weaker cognitive modes, since such cognitive processes will be partly or completely covert and non retraceable, in the sense given by Hammond, by the negotiators and their counterparts. It is suggested that it will bring about a lower value.

In line with much of the dominant literature, Thompson considered that a deliberate and systematic approach to preparing negotiations was necessary (Thompson, 2006). However, data from the respondents suggested that even systematic preparations relied on weaker cognitive modes, possibly weaker than what mainstream negotiation research prescribed or expected.

At this stage, it is argued that the experience of preparing negotiations as described by the respondents indicate two potentially important elements:

- the methods actually used and described in these interviews, pointed to weak cognitive processes, and probably weaker than what the conventional approach expected and perhaps weaker than what the respondents themselves believed;
- even more formal preparation approaches appeared to point to weak cognitive processes, in any case weaker than the validity that could have been attributed to them by respondents., which may be misleading.

Section 4 Different hierarchical levels may induce different cognitive modes

Dreyfus and Dreyfus' core argument is that intuition is a defining characteristic of experts or, as they put it: "intuitive judgment is the hallmark of expertise" (Dreyfus & Dreyfus, 2005, p. 779), in particular with expert managers (Dreyfus, 1983). To them, intuition is all about being able to "discriminate thousands of special cases" (Dreyfus & Dreyfus, 2005, p. 788).

That may well be true. However, the Dreyfus brothers did not consider at all the impact of the task environment on the cognitive processes. It is argued here that it is not so much the level of expertise which induces the type of cognition but the task itself. Or put differently, intuitive judgment is the cognitive process of last resort (Hammond, 2010). In the ambiguous and uncertain environment in which most experts are, whatever their hierarchical level, many tasks will induce weaker cognitive modes. In such an environment, the difference between an expert and a novice is that the latter's performance will probably be lower than that of the former because the novice does not have the large experiential bank that an expert has. In other words, in the SJT framework, intuition is not a cognitive process which is the preserve of experts, it is the cognitive process of last resort for anyone and everyone. The true difference will therefore lie in the actual achievement in the use of intuition: experts' intuition may be more effective than novice's. Moreover, the Dreyfus perspective seemingly accounts only for memory-based intuition, that is, "pattern-matching" ("discriminate thousands of special cases"), and does not account for intuitive judgments which are not based on patterns but on the use of multiple fallible indicators, such as social judgments. Last, as Hamm noted (Hamm, 1988), the Dreyfus perspective did not account for in-between cognition, that is quasirationality.

Moreover, this also means that the higher in the hierarchy the more the decision-maker will be facing unstructured and uncertain tasks, which induce cognition towards weaker cognitive modes.

Moreover, the higher in the hierarchy, the least one has to justify one's decision (Respondents 1 & 8). Respondents 1 and 8 were the most senior interviewees, with direct contacts with the political decision-making level.

Said Respondent 1:

“When you are a decision-maker you don't have to justify yourself, you can explain why you behaved this way, they don't really justify”.

This may have a cognitive impact by further inducing the negotiation decision-makers' cognition towards weaker cognitive modes, though, of course, the decision-maker may use another cognitive process. Indeed, as Hammond puts it, intuition is about seeking accuracy or rationality “the easy way” (Hammond, 2007). Therefore, a political decision-maker, by the very opportunity of not having to justify one's decisions, in addition to facing often quite uncertain issues, is induced to rely on judgement (that is, in Hammond's terms, a very weak cognitive mode), which is the cognitive process of last resort (see above).

When questioned about final decisions in negotiations, Respondent 12 alluded to a common phenomenon:

“The ones who are taking breaking decision, I would say, that's more the political level, [...] the Commissioners, that's the only ones basically who have the possibility to go beyond the mandate because they are the politicians who are responsible for a particular policy, so they are entitled to take decisions [...] **This means that you prepare a briefing and the outcome of the meeting is completely different [laughter], you know, what was said in the meeting was completely different, in some cases, from what was in the briefing**” (my emphasis).

This extract hints at an interesting element from a cognitive viewpoint in negotiations: the fact that high level decision-makers sometimes do not rely on the proposed briefing (which should have induced them towards a more analytical cognitive mode), alludes on the one hand to their freedom in negotiation, and on the other hand, to the fact that other elements may have intervened in the negotiations, elements which they are not compelled to justify to anybody. One of these elements may be new circumstances and information which appeared in the negotiation (one can also think of negotiation as an information-seeking process)

and/or the human side which, as we have seen, plays a crucial role and can only be scripted or briefed with difficulty. As an aside, a respondent mentioned he rehearsed his negotiation with team members; however this may well be a mere waste of time from a pragmatic and cognitive viewpoint in most negotiations (Thompson, 2007, p. 7), except perhaps in those with a heavy procedural content (which may be the case in international conferences). The mention of the laughter by Respondent 12 hints at the fact that such a situation may well be rather common.

However, such a “take the easy way” cognitive strategy is not only reserved to leadership. More broadly, an environment where there is little or no need to justify one’s (negotiation) decisions, either because the issues are not important for management or because the latter is too busy, may induce weaker cognitive modes. For instance, Respondent 15’s cognitive modes appeared consistently at a quasirational level, with a strong emphasis on experience and tacit knowledge, because he had very little obligation to justify his negotiation decision in the case he reported on. His response is representative of such a situation and is therefore worth while being quoted at length:

“It was a kind of package deal, we were also obtaining closer deadlines on some other pieces of legislation we gave in agreeing on 3 years on [policy] even though our initial red line was two [...] Unfortunately that was not an example that required the attention of the hierarchy, because it's a very specific agreement, in which there is no real consequences for the [policy field].[...] “We didn't report back to the top management, we reported back to the other line units [...] in charge of those pieces of legislation. [...] It was rather a lack of availability and time to go down to less critical international files compared to others.”

As a consequence, he added:

“knowing... I was more or less in charge of the negotiation, I had no ... specific, clear instructions from my hierarchy...made it easier. I agreed more or less the compromises, the landing zones, myself. It's easier and faster”.

“I didn't really justify it in details, I explained it was part of a package deal, that we have obtained some more ambitious dates on some other parts, and I explained...that it was our interest to consolidate and finalise that agreement, so

that we can close that chapter. So I gave some elements of context and background and I recommended them to agree on that compromise, and they did”

When asked how he made up his mind, for instance on issue ranking, he replied:

“It's a mixture of knowledge [...] and the rest is more intuitive”.

In addition to being faced with more uncertain issues and to having less need to justify one's decisions, higher level negotiators enjoy, compared to lower level ones, a different vantage point, which usually give them a “broader picture”.

Said Respondent 9, himself a former senior manager and adviser, when asked about making trade-offs:

“[trade-offs are] fundamental. But that's only possible from a certain level of power, because you must be able to get out of your own little basket”

Respondent 12 added:

“Here we proposed options to top people and top people pick up their preferred option. [...] People who have to decide on options, **they have a greater picture than us**. Either you are focused on a particular sector, or on a region or even some countries [...], **that's impossible to take a decision in isolation, you need to include the greater picture, and that's the role of the deputy director-general or the director-general**”.

Such an environment with a broader picture further may induce cognition towards weaker cognitive modes, since there is no other way for the human brain to integrate all the available information. Indeed, as suggested earlier, a holistic approach is the hallmark of pattern-recognition (Margolis, 1987), which is an intuitive search for coherence (Margolis, 1987; Hammond 1996; Hammond, 2000). Cooksey interestingly defined pattern recognition as involving “the application of prior learning and experience in the search for ways to categorize and integrate new task information. Certain task characteristics will tend to induce the need for pattern seeking on the part of the decision-maker: [...] [for instance] information which requires the decision-maker to produce a coherent account of their judgments regarding the occurrence of real, recalled or anticipated events” (Cooksey, 1996, p. 22). It is therefore suggested that, in decisions related to negotiations the decision-makers has not

personally been involved in, such tasks will induce them towards coherence, and probably towards weaker cognitive modes. On the other hand, when participating personally in negotiations, the final decision-makers will be induced towards a correspondence approach (accuracy of decision), unless the political situation induces them to decide on an ideological basis (which is not uncommon), or because of a lack of criterion, again with an induction towards weaker cognitive modes since there is no or little need to justify themselves.

The political (even ideological) basis of some decisions, as opposed to accurate decisions, was mentioned by Respondent 27, a senior manager with a long political experience: when asked about the basis of decisions by Member States and whether pragmatism or official doctrine was prevalent, he responded:

“Often, yes, [doctrine mattered] really with the support of a majority of Member States, yes indeed”.

Respondent 15 made an intriguing comment on the final decision-making process in EU negotiations, with possible important cognitive consequences:

“Usually on big files, what matters is that you have an agreement, so you don’t enter so much into the details of the specific concessions which have been granted to that or that country”.

This alludes to Winham’s conclusion whereby many different pressures lead negotiators to compromise (Winham, 1977 (a), p. 108). Perhaps we could usefully interpret the above two statements in the following way: in major, complex negotiations, as EU negotiations usually are, due to the mere number of political actors involved and to the decision-making process itself, it is nearly impossible, in spite of analyses and impact assessments to reach a more or less accurate judgment of the impact of a piece of legislation. If the proof of the pudding is in eating it, by definition, a draft EU legislation cannot be proofed beforehand. This means that, on the whole, decision-makers do not have any criterion against which measuring its concrete impact. As a consequence, only a coherence cognitive strategy can be used. This is where politics and ideology come in the picture. EU decision-makers, when negotiating, can only check the consistency or coherence of the arguments put forward. Such an interpretation also refers to renowned political scientist Anthony Downs’ assertion that uncertainty leads State actors to an ideologization of the decision process (Downs, 1957). In addition, negotiation

scholar Spector in his study about the negotiation preparation methods of Austrian diplomats, claimed that “negotiations dominated by ideological concerns [...] are more influenced by political dogma than by analysis” (Spector, 1997, p. 427). This interesting quote indirectly points to the contrast between some analysis-inducing tasks and more intuitive-inducing ones, the latter being those based on political concepts and principles. In the EU context, the latter are usually the values mentioned in the article 2 of the new treaty on the European Union (Human dignity, freedom, democracy, equality, the rule of law and the respect for human rights).

This may have important cognitive, and possibly political, consequences.

First of all, it helps explain the difference between the negotiation briefs prepared by staff and the outcome (see above); such an explanation helps-perhaps counterintuitively-remove all suspicion of irrationality associated with such situations. Indeed, final decision-makers in negotiations are not irrational: it is suggested that they take their decisions on and in a specific negotiation on the basis of reasons, one of which being of a mere cognitive nature: uncertainty breeds coherence and weaker cognitive modes (Winham, 1977 (a); George, 1980; Hammond, 1996).

Second, since the needs of the decision-makers are related to coherence, staff should be sensitized to change gear to meet such cognitive needs. Such a competency may be the demarcation line between domain expertise and political acumen. This may also represent the need for more “political thinking” from staff which is echoed from time to time in the upper echelons of some EU institutions: shying away from concrete details, which may include elements inducing a correspondence cognitive strategy (for instances impact assessments.), towards a translation of the file into broad political principles and an extensive narrative (a coherence approach inducing weaker cognitive modes). Again, this points to the competency of being able to adapt one’s cognitive strategies to the needs of one’s political client, which are themselves induced by the task environment. Respondent 1 was an interesting example of such a competency:

“I can convince my minister or prime minister that this is a reasonable solution. [...] If you have reasonable argument, you will be able to convince anybody if it seems to you reasonable.”

This is apparently points to a coherent and analytical mode. However, when asked further what he meant by “reasonable”, such an interpretation loses some power:

“I mean, I suppose that there is an element of rationality but there is an element of experience. You would know, you get at the end or through a career, that’s why it is to give that sort of post to people who would grow in the process that you have enough examples in your memory ofsolutions to that sort of problem ; [...] Half of the job of [a senior] negotiator is explaining authorities, political or administrative, ... “if you go off with this position you will not get anywhere”, ...and in most cases people accept that if you are on the front line and say “this isn’t going to work”, “it is unwise”, “it doesn’t work that way”. If you have confidence in the negotiator, you should follow what his instinct and his reason say what is feasible and not feasible.”

Respondent 8's response epitomises such a use of intuitive coherence: when asked whether he mentioned his judgment when he explained his negotiation decision to his principal, a European Commissioner, he replied:

Interviewer: “Did you say: "that's my judgment, or my intuition"”?

“Of course, all the time. Of course! You are on your own, as I said”.

Linked to the above mention of the importance of the hierarchical level, this points to the suggestion that weaker cognitive modes are less the hallmark of expertise than the cognitive mode induced by the task. This means that senior negotiators will usually be permitted to implicitly or explicitly refer to it to explain their decisions, whereas more junior ones and even middle management will hesitate doing so. As mentioned earlier, at senior level, the actual reference will depend on the one hand on the personality of the political principal and on the level of mutual trust between the latter and the agent. Respondent 8 is again, due to his seniority, a case in point of the cognitive freedom for negotiators at higher levels:

“[A]fter a while you know what your Commissioner...you know with [EU Commissioner's name] for quite a while as his chef de cabinet , at a certain moment I could nearly speak for [that Commissioner] on everything, nearly, not everything of course, but.....on the issues we were dealing with together, [...] I had the feeling I could absolutely anticipate on what [the Commissioner] would

say on most of the issues, and if I was not sure I would ask him, but we were friends. And I had a feeling that with most Commissioners we were rather friends, and that's very, very important. Of course if you don't have an atmosphere of trust with the people you negotiate for, you are in trouble."

Another possible impact of the difference of hierarchical level is, conversely, the cognitive limitations which are tacitly imposed on lower ranking negotiators. Said Respondent 12:

"So when you are on a negotiation, you have a mandate, and if it's not in your mandate, you take note and you go back to Brussels, you don't take risk, because the problem is...if you...improvise, it could have a very strong impact on the process, and you realize immediately it was wiser to go back to Brussels, and to discuss and to come back to the negotiating table, than trying to save time and to take a fast decision, that will in the end complicate a lot the situation, usually you don't take risk. (12)

This means that, facing a task which may be inducing towards weaker cognitive modes, and in spite of the latter being better adapted to the task at hand, lower-ranking negotiators may decide to resist the cognitive change towards improvisation and to change the task format instead, by asking for a temporary break or further instructions from headquarters. This may well impinge on the efficiency of a negotiation since there is no scope to use the full range of cognitive strategies and tactics. Such a situation has to be of course put into the bureaucratic context of the EU. It refers to a tacit choice of minimizing risks by keeping the official line to the possible detriment of a more efficient negotiation decision.

In addition, as alluded to above, top management and leadership face, by definition, the most uncertain and unstructured tasks, including in negotiations. To quote Winham, "[s]triking a final overall balance is less a bargaining process with the other side than a political process of convincing capitals to accept what negotiators are prepared to deliver", which is why senior negotiators are in charge of such a task (Winham, 1977 (b), p. 108).

This means that such tasks may induce cognition towards weaker cognitive modes, even though negotiators may decide, with variable levels of success (see chapter 1), to use a

stronger one, if time permits. Conversely, the very fact that decision-makers have to often rely on weaker cognitive modes reinforces the belief that top managers and political leaders are expert intuitive decision-makers- which they may well be. Linguistic correlates of their use of weaker cognitive modes can be found, such as a very frequent use of words related to broad political principles. It is suggested that such a use of abstract political vocabulary is not “simply” due to a political environment, but because politics can be best expressed through broad principles (“freedom”, “free economy”, “democracy”, “solidarity” etc.) and thereby is an intuition-inducing environment (Hammond, 2007, p. 180).

In that respect, according to political scientist Sarat, “generalized, principled and deductive” political thinking, as opposed to substantial and concrete political thinking, is about coherence (Sarat, 1975, pp. 247-248). Moreover, according to Downs, politicizing issues acts as a simplifying mechanism of decision under uncertainty (Downs, 1957), or, to quote Winham, it provides in negotiations “coping mechanisms for reducing the uncertainty in the [...] transactions” (Winham, 1977 (b), p. 96). Such a simplification mechanism may explain the fact that protracted negotiations by experts are often suddenly and successfully resolved at the political level. For instance, Preeg’s report of the very complex Kennedy Round trade negotiation showed that political leaders used broad principles such as “mutual interests”, furthering the “Atlantic partnership” (Preeg, 1970, p. 59), which led “within ten minutes” to the conclusion of a negotiation round which had lasted and had procrastinated for months (Preeg, 1970, p. 192). Newhouse also related that a solution to a crippling problem in critical nuclear negotiation with the Soviet Union was found within the White House “in a single meeting”, noting *en passant* (and, arguably, in a very interesting way for this study) that it “had quite escaped the [normal] analytical process through which [...] ideas normally have traveled” (Newhouse, 1989, p. 184). Drawing on the findings produced in this study, we could contend that the solution did not stem from superior intellectual abilities of the decision-makers, though they may be, but because the latter used, in a highly complex and uncertain task environment, the weaker cognitive mode induced by the environment, and not an analytical mode which had found its limits. Moreover, Winham noted that senior negotiators have to handle numerous and complex issues in the same time, which entails the necessity to search for “relationships between dissimilar categories” (Winham, 1977 (b), p. 108). To do so, senior level negotiators have to resort to political solutions which do not welcome the precision of quantitative analyses (Winham, 1977 (a)). This also what Preeg

found in his account of the Kennedy Round international trade negotiations (principally between the US and the then European Community), where the final solution had to be based on something different from statistical analyses which had been intensively used before (Preeg, 1970, p. 133). This was due to the fact that statistics were found to be unable to deal with the lack of comparability of the multitude of items and to offer an overall balance (Preeg, 1970, p. 130).

As a consequence, it is argued that the task environment of higher level negotiators or principals make it necessary to use a different cognitive mode than that of the lower echelons. The use of political vocabulary may be an indicator of such a different, weaker cognitive mode.

Practically speaking, this suggests that when the “administrative” level reports a negotiation back to the political level, it should take the cognitive limits of the political leadership into account both in their communication strategy and in their understanding of the leadership’s decision. This means that lower echelons should have another model of their superiors, to avoid the dismay of seeing their analytical work being oversimplified when put for consumption for political level (George, 1980, p. 21), or to avoid the age-old complaint: “[w]e had the correct analysis of the problem and the right answer, but the higher-ups didn’t listen” (George, 2001, p. 10). It is suggested that the higher-ups didn’t listen because in many cases they could not listen from a cognitive viewpoint, as the overflowing of complex information, which they did not even acquire on their own, induced them to use an intuitive approach focusing on coherence, as opposed to an approach focusing on reaching an accurate judgment. Administrative and political levels may be therefore be on a cognitive collision course, the former having the means of being “analytical” (in a very broad sense, as we have seen), the latter being forced to be “intuitive” (again in the broad sense). Political commentator and negotiator Newhouse alluded to that when he described the internal conflict within the US government on the nuclear SALT negotiations with the Soviet Union: “the bureaucracy was looking at the MIRV issue analytically, while the White House saw it in subtler and more political terms” (Newhouse, 1989, p. 180).

Moreover, as George distinguished the policy analyst’s “analytical judgment”, from policymaker’s “political judgment”, a distinction could be made between “policy” (staff) and “political” decision negotiation tasks. At the same time, as we have seen above, even policy-

related decisions do not command analytical cognitive mode understood in common parlance: more often than not, the “analysis” also includes many intuitive elements based on tacit knowledge and experience, which makes the analysis take on additional quasirational features.

This means that negotiators and decision-makers alike should become aware that the tasks associated with different levels of responsibilities may induce a different cognitive mode than theirs, in order to avoid possible cognitive conflicts, translated into misunderstandings

Conclusions

The data used in this chapter originate from interviews with negotiators in the EU context. These interviews were carried out by drawing inspiration from the explication interview technique. The latter aims to “elicit a verbalisation of activity” (Vermersch, 1994, p. 17), that is, describing "how the task unfolded, as it has been effectively carried out in a real task" (Vermersch, 1994, p. 18). It is considered that such a technique helped making more visible and explicit how the negotiations tasks were carried out, and particularly helped making more explicit the cognitive processes which were partially or totally unconscious at the time of the action.

The data have been organised in three sections, in accordance with the cognitive mode the described negotiation tasks were assumed, on the basis of a series of indicators, to have induced in the interviewees.

The data indicate, at a more general level, that negotiators use a great variety of cognitive processes, from analysis to intuition to experience based-quasirationality.

At a more specific level, the data indicate that different negotiation tasks induce different cognitive modes, which supports the SJT perspective. In particular, several critical negotiation tasks appear to induce weaker cognitive modes, for instance: social interaction-related tasks, making trade-offs, concessions and package deals, finding the right "moment", facing the unexpected, and preparing negotiations. Moreover, the data indicate that the cognitive modes may be influenced by the task, that is, the higher the level, the more

uncertainty, and therefore the more the intuitive mode may have to be used, for lack of available analytical method, in accordance with the SJT perspective.

Last but not least, the data suggest that the substance of negotiations, in this case political issues, may induce towards an intuitive search for coherence at the higher negotiation decision-making levels, while in the same time inducing negotiators to a possible a priori cognitive choice in favour of coherence strategy and analytical tactic, that is, "easy to justify decisions".

Final conclusions

1. Introduction

1.1. Academic background and key debates

The main aim of this research was to illuminate an issue generally neglected in prevailing models of and prescriptions for negotiation: the use of intuition and weaker cognitive modes by negotiators. The result of this exploration was to guide a reflexion on how negotiation training models and theories could better and more fully take into account such an experience to provide a foundation for better learning.

As the literature review demonstrated, the concept of intuition is fairly well established in psychology. Research has consistently suggested that negotiators, as much as other human beings in general and decision-makers in particular, experience the whole range of cognitive processes: from analysis to intuition. Moreover, the latter is a natural human cognitive experience, to which extra sensorial features are sometimes attached, and which contribute somehow to its "bad reputation".

However, in negotiation, the dominant research paradigms, based on behavioural decision-making research and cognitive psychology, warned of the structural deficiency (as a cognitive bias) of intuition. Indeed, both behavioural decision-making research and cognitive psychology emphasise the prescriptive use of analysis in all circumstances. On the other hand, research in management, in expert performance and in naturalistic decision-making have repeatedly praised intuition as a key feature of expert practice (Dreyfus, et al., 1986; Agor, 1986; Atkinson & Claxton, 2000; Sadler-Smith & Shefy, 2004; Klein, 2011).

Such widely diverging paradigms may leave negotiators confused and may lead to wonder whether they should follow negotiation research which basically says that their natural experience of non analytical cognition, based on their experience should be put aside, or follow insights from management and naturalistic decision-making which incite them to risk relying (almost) exclusively on intuition in an increasingly complex world, where objective knowledge and analysis are deemed a necessity.

Another perspective, initiated by Brunswik and Hammond, paved the way towards reconciling the two paradigms. Hammond and the SJT perspective argued that it was part of a spectrum of cognitive processes (Hammond, 1996; Hammond, 2000; Hammond, 2007). Indeed, Hammond and others showed that some tasks induce intuition, others induce analysis and others still induce an in-between cognitive mode, quasirationality. These three cognitive tactics are said to serve, according to Hammond, two main cognitive strategies: correspondence and coherence, that is, accuracy of judgment and logical reasoning are two aspects of rationality. Brunswik and Hammond also argued that intuition had an adaptive value. Moreover, Hammond's empirical research showed that, unlike the dominant cognitive psychology research paradigm, success in a task depended on the match between the cognition induced by the latter and the cognitive process actually used, and more specifically that an intuitive response to an intuition-inducing task delivered a higher achievement than the use of analysis.

This perspective provided a comprehensive theoretical and methodological framework to explore the cognitive processes of negotiators in the European Union setting. The Hammond framework acted in the same way as Brunswik's, that is, "as a framework for the multilevel explanations of complex social, historical and psychological processes" (Takala, 1984, p. 78). Such a framework was used to explore and analyse interviews with negotiators in the European Union context. It also influenced the methodology of this research in that it inspired the choice of an interview technique called "explicitation interviewing".

This project therefore aimed to contribute to a better understanding of the cognitive processes used by negotiators in real (as opposed to laboratory-based) negotiations, in particular in the context of tasks that inherently promoted uncertainty. More specifically, it aimed to shed a greater light on negotiations tasks in which non analytical cognitive processes were at work. In so doing, it aimed to provide insights for negotiation research, practice and training.

1.2. Methodological approach.

This research was based on 26 interviews with negotiators working in the European Union context. These interviews were carried out using the explicitation interviewing technique. Its purpose was to elicit a verbalisation of activity (Vermersch, 1994, p. 17), in this case evoking specific experiences of negotiation tasks, with high degrees of uncertainty.

Such an approach allowed the focus to fall on the experience as it was lived by the interviewees. In so doing, it facilitated-so far as possible- the avoidance of generalisations, repetition of previous learning or education and personal judgments about their experience. Interviews started with an invitation to respondents to recall one concrete instance of a situation, and to describe how it was experienced, and how the task was carried out concretely, not in general. Moreover, such a focus on concrete actions allowed both a first sampling of situations by the respondents and an anchoring of the situation described in the respondent's everyday context, as opposed to laboratory-based or paper-based situations. The analysis of the transcripts used a series of criteria, drawn from the theoretical framework, to categorise indicators of the different cognitive modes.

In line with Brunswikian psychology, the approach of this study was based on the following assumptions:

- the investigation of the cognitive processes of negotiators in their ordinary context (Brehmer, 1984, p. 389; 392);
- equal attention should be given to the task environment and to the cognitive processes per se;
- such an investigation would lead to delivering basic data as “rich sources of hypotheses” (Brehmer, 1984, p. 391) ;
- such data should be used to measure their “achievement”, that is, whether they were successful or unsuccessful, in a later phase, which is to be done in another research given the limitations of this piece.

On such a basis, the conclusions should be considered as hypotheses for further research.

1.3. Contributions

Previous empirical research on negotiation has tended to neglect the actual use of intuition and quasirationality by negotiators. Consequently, the aim of this study was to contribute to the understanding of, and the theory on, the role of such cognitive processes to build on existing research within cognitive psychology on the use of such cognitive modes, by extending it to another critical domain, in this case negotiation.

In doing so, the intention was to challenge the dominant paradigms used in the field of negotiation research by foregrounding the role of intuition- thus extending Brunswikian and Hammondian research on decision-making to the field of negotiation.

In this respect, the study represents a novel and original empirical investigation of such cognitive processes as they are used in practice by negotiators.

2. Conclusions about the research problem.

What are the cognitive processes experienced by negotiators, particularly under uncertainty? Specifically, what are the negotiation tasks inducing non analytical cognitive processes?

2.1. All cognitive modes

Saying that respondents employed the whole gamut of cognitive modes which human beings are known to be using may appear commonsensical and possibly trite. Yet, mainstream negotiation research appears to leave that fact aside. Moreover, respondents appeared to be employing weaker cognitive modes, and intuition in particular, for uncertainty-dominated tasks.

2.2. Cognitive inducement and cognitive response.

The findings suggested that the nature of the task does appear to induce a specific cognitive mode, in line with the Brunswik/Hammond theoretical framework used in this research.

Moreover, and conversely, the findings also suggest that negotiators' cognitive mode corresponded to that induced by the task.

First, the data suggested that **analysis** was induced by the bureaucratic (and possibly legalistic) task environments of the respondents.

Moreover, such task environments appeared to induce a coherent cognitive strategy, that is a strategy aiming at rationality and logic.

Even though an a posteriori rationalisation of a negotiation decision (that is, finding reasons which did not exist or exist partly at the moment of the negotiation) is also possible, the findings of this study also indicated a tendency towards an a priori cognitive choice ("easy to

justify decisions”). With easy to justify negotiation decisions, negotiators and principals can “tick off” the negotiation task easily, but at the possible expense of the quality of the negotiation decision. In other words, principals may be asking their agents the wrong type of information (coherence/logic) for a good reason (because they cannot do otherwise, at least at first sight). Second, and linked to above, their own cognitive situation requires a political justification as a way to make sense of all the information they are surrounded by, which induces weaker cognitive modes. This may lead principals to have an analytically coherent understanding of the negotiation situation, but possibly with a limited correspondence with the facts. Moreover, their need for justification towards their principals may lead some negotiators to use a poorly suited cognitive mode during negotiations. All this may jeopardise the quality of negotiation decisions by principals and negotiators. On the other hand, as some senior respondents pointed out, some principals who trust their negotiators, give them freedom which allows for cognitive flexibility in the negotiation task, a flexibility which is regarded by practitioners as highly desirable for success (Kissinger, 1966, p. 507; Winham & Bovis, 1978, p. 295; Winham, 1979, p. 9; 15). Indeed, some of the data suggest that the more experienced and senior respondents were aware of such a cognitive conflict.

Some data suggested that respondents who enjoyed a high level of trust from their principals used weaker cognitive modes both during negotiations and in the explanation stage. Put differently, such negotiators, knowing that their principals would trust their experience, may have been more able to use whatever cognitive mode was fit for the task and to call upon trust at the justification stage. In contrast, negotiators, usually at a lower hierarchical level, have, on the whole, to justify analytically their negotiation decisions.

This could lead to the following question, to be explored in further research: to what extent does the use of an a priori cognitive mode impact the quality of a negotiation?

In addition, the data suggested that many key negotiation tasks induced the use of **intuition** in particular, because of their being characterised by uncertainty:

- sizing up the dynamics of a negotiation and/or sizing up the other negotiator (diagnostic stages of a negotiation);
- making trade-offs and making package deals;
- reacting to the unexpected;
- finding the right moment.

Uncertainty reigns supreme here: there exist no clearly articulated analytical rules to shape or guide the way in which such tasks can be undertaken. Moreover, it is argued that the lack of time and the number of non-verbal as well as verbal cues in the negotiation environment may even make the use of analysis grossly inadequate.

The data suggested that quasirationality was found predominantly in:

- preparation;
- prioritising issues;
- accepting a deal;
- dealing with politically-related issues.

2.3. Different hierarchical levels may induce different cognitive modes.

In contrast to the "intuition-as-expertise" school of thought, but in line with the SJT framework, the interviews indicated that intuition may not be the preserve of experts or senior decision-makers, even though it was found more often at that level.

More specifically, the data suggested that different hierarchical levels may induce different types of cognition, because the task environment of such different levels is different: the higher the level, the more ambiguity and complexity and the less time available for decisions, which brings about the need to simplify the process by appealing to grand political principles, or simply to the trust between the negotiator and the principal. Indeed, the most senior respondents did not hesitate to call upon trust to justify their negotiation decisions to their principals. Such a situation is rarely possible at the lower echelons. This suggests that lower level negotiators may be more cognitively constrained than higher level ones. At the same time, the latter, given the information overload they experience, may have an ambivalent need regarding the type of information they require from the lower levels. First, the need to justify decisions and to produce coherent accounts of the negotiations may lead negotiators towards coherence and analysis not only at the justification phase but, worse still, as suggested above, at the negotiation stage. The principal's need for coherence stems from the fact that, being absent from the negotiation scene, they can (usually) only make their judgment out of the content and coherence of the argument put forward.

3. Implication for theory

3.1. Contribution to negotiation theory and research

Previous research on negotiation, following the dominant approach, has failed to address systematically the use of non-analytical cognitive modes in negotiation. This is where this study makes its most fundamental contribution. Based on the theoretical and experimental frameworks of the Social Judgement Theory, this study provides empirical evidence of the use of non-analytical cognitive processes in some key negotiation tasks. It is indeed the first qualitative enquiry of negotiation using the Social Judgment Theory framework in representative tasks in their original context (through the use of explication interviewing), in particular where cognition was disrupted by ambiguity or uncertainty.

The results lend support to the SJT perspective whereby both the cognitive process *and* the task should be investigated. More specifically, it lends support to the conclusion that the task environment may induce specific cognitive processes, be they analytical, intuitive or quasirational.

If the findings apparently resonate with the dominant negotiation paradigm in that "too many people [...] rely on their gut instinct or intuition as they negotiate" (Malhotra & Bazerman, 2008, p. 5), they also challenge its prescription whereby "[such analytical] framework will help [them] minimize their reliance on intuition" (Malhotra & Bazerman, 2008, p. 5). Indeed, some tasks do induce weaker cognitive modes, for which no analytical tool but perhaps postponing a task is available. As indicated earlier, Brunswikian psychology showed the adaptive value of cognition, of perception and intuition in particular. Moreover, previous SJT based empirical research showed that at least in some tasks weaker cognitive modes may be more appropriate than analysis (Peters, et al., 1974, p. 130), and Hammond et al. showed that using intuition in tasks inducing it will deliver a more accurate judgment than by using analysis (Hammond, et al., 1983).

In addition, the findings add something of a nuance the Dreyfus & Dreyfus approach whereby intuition would be the preserve of experts, and some management research's emphasis on the intuitive mode. In fact, as suggested by the SJT, intuitive cognition is often used by experts because the environment encountered by them is likely to induce weaker cognitive modes.

As far as personal experience of negotiators are concerned, it was mentioned earlier and shown in the interviews that negotiators regularly use intuition, and quasirationality. It is assumed that, being professionals for whom the consequences of their actions may be critical, there must be some significant reason for them to have used a cognitive process that the dominant paradigm labelled as inefficient or even dangerous. Though the issue of whether the use of intuition promotes more successful negotiation is to be left up to further research, it is hypothesised here that they did so because they believed it served them well, and because they may not have had any better cognitive alternative from their perspective. Indeed, as Hammond suggested, judgment, that is, the use of weaker (non fully analytical cognitive processes) is the cognitive solution of last resort, given the uncertainty-geared tasks they encountered. Conversely, it is suggested that cognitive conflict appears when the cognitive process does not match the task at hand, and more specifically when, as data of this research suggested, the cognitive mode of the negotiators was unduly influenced by the bureaucratic or legalistic environment they were operating in. That is, negotiators may have forfeited the cognitive flexibility which was necessary to be efficient, for the sake of decisions which were easy to justify to their principals. In doing so, and in keeping doing so, it is hypothesised that negotiators made here a choice which was efficient at the justification level (their decision was much easier to justify; it was an easy solution), but possibly inefficient at the negotiation level (by pre-empting the adequate cognitive process).

Moreover, if intuition and analysis are, respectively, the hero of management research and of negotiation research, the data suggest, in line with Hammond (Hammond, 2007; Hammond, 2010), that the (unsung) hero of the story are both "cognitive compromise", that is quasirationality, and cognitive flexibility. The former, lying somewhere in between analysis and intuition, may well make up the most of our cognitive activity, as Hammond recently suggested (Hammond, 2010), while the latter, as commonsensical as this conclusion may appear, is certainly more effective than cognitive entrenchment in the (analytical or intuitive) poles of the cognitive continuum. It is argued that it is all the more true in environments where uncertainty and ambiguity are ever present, such as in negotiations in the EU setting.

Last, this thesis argues first that the use of non analytical cognitive modes is not due to flawed cognition or cognitive sloth but because such tasks induce negotiators' cognition towards such modes, and second, that, cognition being adaptive, such a use may have better chances of achievement in the task than the use of analysis.

The findings are therefore an invitation for further research on the one hand on the cognitive impact of other negotiation tasks, including those mentioned in annex V, as well as on the achievement of the match of the cognitive modes used by negotiators with that induced by the task.

3.2. Contribution to management and labour market studies.

This thesis would contribute to management and labour market studies by emphasising the need of researchers in these fields to better understand and take into account the nature and contribution of quasi-rationality and intuition, not only in negotiation but also in organisational decision-making more broadly.

Moreover, this thesis invites researchers in the field of learning and training to undertake more research on the cognitive impact of tasks, not only in negotiation but also in other task environment, such as management or decision-making. Indeed, building on earlier insights from Hammond (Hammond, 1973) and others (Rappoport, 1965, Rappoport & Summers, 1973), this thesis suggests that conflict may arise not only from motivational differences, as indicated by mainstream negotiation research, but also from cognitive differences.

Moreover, this thesis suggests that more research is needed on the link between the development of training actions and the actual cognitive demands of different target populations: senior managers/decision-makers in negotiation, and other fields, may have different training needs, not only because of different experience levels, but also because the tasks they are confronted to are different and induce different cognitive modes.

4. Implication for practice

Kendler noted that a paradigm "cannot be correct or incorrect, only more or less productive" (Kendler, 1984, p. 19). It is argued here that the SJT framework used by this research is indeed more productive, from a theoretical but also from a practical perspective, than the dominant negotiation paradigm. Indeed, it is contended that it may give negotiators a workable heuristic tool in negotiations:

- its prescriptions are based on the experience encountered by negotiators;

- it covers the use of the whole span of cognitive processes, thereby following the necessary flexibility which negotiators know is paramount for successful negotiations, in contrast to the one size (analysis or intuition) fits all approach of other paradigms;

- it complements, rather than contradicts, other negotiation prescriptions;

- to a certain extent, it is a predictive approach, based on tasks.

If the suggestions of this research are established, they may have an important impact on the practice of negotiators as well as on the way negotiators are trained.

4.1. For EU negotiators.

EU negotiators would benefit from this research in several ways.

First of all, they should become

aware of:

- the possible impact of the task environment on the cognitive mode;
- the possible impact of the cognitive mode on the negotiation itself, and particular on cognitive conflicts between the negotiators themselves, but also within the team and with their principals, since the use of different cognitive modes may lead to conflict.

More specifically, this research suggests that several of the key negotiation tasks they are regularly engaged in induce non analytical cognitive responses. Moreover, based on the adaptive value of cognition, such a situation should give them confidence in using their non analytical cognitive modes, while being aware of their limitations. In the same way, they should become aware that such a situation also applies to their counterpart. they can then expect the following consequences in such a situation:

- a possible cognitive conflict, even if they and their counterpart agree on the substance (for instance, Hammond & Brehmer, 1974), because their use of intuitive or quasirational modes makes it more difficult to report and share the way they think; conversely, being aware of such a situation can lead them to predict such situations and attend to it without having to assume evil motives from their counterpart (Hammond & Brehmer, 1974):

- a possible cognitive conflict with their team members and their own management, for the same reasons, and with the same consequences; EU negotiators may have to learn to recognise the cognitive impact of some of their negotiation tasks and to be explicit with their

team members and their management about that very aspect, as a way to avoid cognitive conflicts;

- the possible cognitive impact of the bureaucratic and legal environment, which may lead them to negotiation solutions which are merely expedient (based on precedents) or merely legally sound, but which may be at a far cry from an effective and perhaps wiser negotiation solution.

4.2. Suggestions for negotiation training.

- Negotiators could possibly be trained to use the approach of this research as a diagnostic tool to anticipate the cognitive mode of oneself and of negotiation counterparts, and/or to anticipate cognitive conflict.

- The findings on the differing cognitive modes used at different hierarchical level could be used to separate in training classes negotiators who are not in the same task environment. Indeed, their task environment may be so different that they may induce different cognitive modes and therefore solutions which are not amenable to “one size fits all” exercises. This contention relates less to the level of experience than the hierarchical or bureaucratic/political level. Negotiators at a higher bureaucratic level face a higher level of uncertainty, for which analytically-based training solutions may not be adequate. Moreover, in those different groups, exercises should be more representative of the challenges encountered in their respective task environment; moreover, the cognitive impact of the different task environment should be explicitly addressed in both groups, in order to contribute to a lowering of cognitive conflicts.

Moreover, while this study suggested that negotiators should have more confidence in their use of non analytical cognitive modes, this does not mean that this piece condones a "innate" way of negotiating. Put otherwise, even though natural abilities are certainly part of one's ability to negotiate, like any other skill or aptitude, human beings' endowment with adaptive skills such as intuition and quasirationality does not mean that they cannot be improved. Such cognitive abilities are intimately linked to experience, even if the latter took place long ago and unconsciously. Even though this remains a mooted question, intuitive and quasirational modes can be improved to a certain extent.

If Hammond himself denied the possibility of even being better aware of when or not to use it (Hammond, 2010), several authors considered that it was indeed possible of "educating" and/or training intuitive cognition (Agor, 1986; Hogarth, 2001; Quirk, 2006; Sadler-Smith, et al., 2007; Sadler-Smith, et al., 2009; Easterby-Smith, Mark; Lyles, Marjorie A., 2009). On his part, Klein (Klein, 1998 p. 42) considered that "pattern matching and recognition of familiar and typical cases can be trained (...) by expanding their experience base". This means that some sort of automatisisation process could be learned, for instance the recognition of typical instances of negotiation, triggering, where appropriate, a specific cognitive response. Moreover, Dane and Pratt noted that "learning is an input to intuition effectiveness" (Dane, et al., 2007 p. 36). In addition, Brockmann & Anthony (Brockmann, et al., 2002 p. 442) considered that "intuition may be considered a vehicle for accessing tacit knowledge", thereby hypothesising that even faster and higher quality decision-making could develop if intuition had a "larger inventory of tacit knowledge to select from".

Educating and training intuition could take different forms. For instance, Klein suggested that experts learn by engaging into deliberate practice, developing an extensive experience bank, getting accurate, diagnostic and timely feedback, as well as "enriching experience by reviewing prior experience to derive new insights and lessons from mistakes" (Klein, 1998 p. 104). On their part, Ross et al. add to the list "building mental models and becoming more mindful of opportunities for learning" (Ross, et al., 2006 p. 412). To do so, different approaches have been proposed: extensive use of practice, involvement in simulations, intensive coaching and role modelling, having workplace learning environments which foster good intuition through effective feedback, and the probing of intuitive judgements oneself and in conjunction with others through techniques such as devil's advocacy in order to uncover potential errors and biases (Leybourne, et al., 2006 p. 491). Hogarth added, as ways to guiding and controlling the tacit system: "impose circuit breaks, acknowledge emotions, explore connections, accept conflict in choices, make scientific method intuitive" (Hogarth, 2001 p. 207).

In fact, developing intuitive negotiation skills could get inspiration from musical improvisation, which "involves reworking precomposed material and designs in relation to unanticipated ideas conceived, shaped, and transformed under the special conditions of performance, thereby adding unique features to every creation" (Berliner, 1994 p. 241). Such a definition emphasises a critical yet often forgotten aspects the necessity of "discipline,

practice and experience" (Weick, 1998; Vera, et al., 2005). As a consequence, as much as "a jazz musician is more accurately described as a highly disciplined "practicer" than as a practitioner" (Berliner, 1994 p. 494), it is contended here that negotiators will not be exempt from the necessity of a similar highly disciplined practice, which go far beyond attending "a" course or having experience. This may be a very common-sensical conclusion yet this is by far not implemented in the real world of adults training in general and in negotiation training in particular (ElShenawy, 2010).

In a nutshell, educating intuition would require duration, repetition and feedback

5. Implications for further research.

In line with the Brunswikian approach, and further to the limitations set out above, additional research should investigate further the findings and the different hypotheses uncovered here.

In particular, additional qualitative investigation should further gather data on the experience of negotiators in diverse task environments, and particularly in uncertain ones, to confirm, nuance or disconfirm the findings. In that respect, Annex 1 presents a series of additional hypotheses regarding the possible cognitive impact of a wide range of negotiation task environment.

When such data are aggregated and analysed, a quantitative approach could be used to measure the achievement of the negotiators in different task environments. This means that experiments should be carried out, with a representative design approach, to measure whether the cognitive mode mostly used by negotiators, as surveyed in the qualitative investigations, led to a successful outcome.

6. Limitations

As intimated in the methodology chapter, this study is characterised by several limitations.

- It is based on only 26 interviews, which Cooksey (Cooksey, 1996) considered as a lower intermediate adequate sampling;
- It did not fulfil completely all the criteria for representative design. In particular, the sampling of tasks was limited since the time of the respondents, working professionals in a

very dynamic environment, was extremely limited. More time was needed to sample more actual samples of tasks to make them even more representative of their environment.

- More time would also have allowed a deepening of the description of the experiences of the respondents.
- As indicated in the methodology chapter, the outcome of the interviews using the explicitation technique are, to quote Varela & Shear, “not pure, solid “facts” but potentially valid intersubjective items of knowledge, quasi-objects of a mental sort. No more, no less” (Varela & Shear, 1999, p. 14) (Varela & Shear 1996:14), which are however open to intersubjective scrutiny and evaluation (Velmans, 1999, p. 304).
- After this qualitative exploration, a measurement of the achievement of the respondents in carrying out their tasks should be carried out. It would aim at verifying whether or not the cognitive mode actually used by the respondent in a task inducing a certain cognitive mode led to a successful outcome.

7. Some closing words

It is hoped that this research has contributed to a better understanding of the cognitive environment of negotiators.

It is also an invitation to negotiation research to consider the impact of tasks on negotiators' cognition. Moreover, if the positive impact of the match between the cognitive mode and the negotiation task is empirically confirmed, it is also an invitation to reopen the case of intuition and quasirationality, with, ultimately, the aim to find new ways for negotiators to make the most of the whole range of cognitive faculties with which they are endowed, and possibly, restore officially intuition, and quasirationality, to the negotiation table.

ANNEX I DATA PROTECTION AND INFORMED CONSENT LETTER MODEL**1. Data protection/informed consent explanation letter**

Date

Name

Address

DATA PROTECTION/INFORMED CONSENT LETTER

Dear ...,

Thank you very much for agreeing to take part in this research on the cognitive processes of negotiators.

I greatly appreciate you giving up your time in order to help me. I am undertaking this project as a part of Doctorate degree which I am studying with the University of Leicester.

The project I am working on is an exploration of the cognitive processes as they are experienced by negotiators, through a case study with European Commission negotiators.

You were selected to take part in this research because you are a negotiator at the European Commission.

You can withdraw from the study at any time if you feel that is necessary. If you are happy to take part in the research, however, I will ask you to sign a consent form giving your agreement. You can still withdraw from the research after signing the form.

The interview will last for approximately one hour. I will ask you a series of questions and will give you the opportunity to ask me any questions you may have.

The interview will be recorded for analysis.

I would like to reassure you that the information which you provide in the course of the interview will be treated in the strictest of confidence. All data collected will be treated in

accordance with ethical codes set out in the British Sociological Guidelines. In addition, your answers will be unattributed to either yourself or to any organisation which you work for or have worked for.

The data gathered during the interview will only be used for my doctoral dissertation. Your own data will be completely anonymous and you will not be identifiable.

Once again, thank you very much for your participation. If you have any questions at any stage of the project please do not hesitate to contact me.

Yours sincerely,

Pierre DEBATY
DSocSci student

2. Informed consent form

INFORMED CONSENT FORM

An exploration of the cognitive processes of negotiators- a case study with European

Commission negotiators

I agree to take part in an interview as part of the above named project.

The research has been clearly explained to me and I have read and understood the participant informed consent letter.

I understand that by signing the consent form I am agreeing to participate in this research and that I can withdraw from the research at any time. I understand that any information I provide during the interview is confidential and will not be used for any purpose other than the research project outlined above. The data will not be shared with any other organisations.

I agree that the interview can be audio taped by voice/tape recorder: YES/NO

Name: (please print)

Signature:.....

Date:

ANNEX II LIST OF INITIAL QUESTIONS

Here is the list of questions initially put to the respondents. One question, based on the same prompt, was asked at a time, when the discussion on a previous question was exhausted. They were meant at covering a series of concrete negotiation tasks, most of which with a higher level of complexity and/or uncertainty.

Other questions, related to what was being said in the discussion, were also asked. They are mentioned, when appropriate, in the extracts of the interviews in the findings chapter. Moreover, respondents were also asked questions related to the specific interviewing technique used in this research, and aimed at deepening what was being said. Examples of such questions are mentioned in the annex on the interview guide.

"I'd like to suggest, if it is fine by you, to take the time to let come back a negotiation moment when [one question at a time]:

- you were preparing a concrete negotiation
- you were facing a dilemma;
- you were assessing the dynamics of a negotiation
- you were assessing the personality of the other negotiator
- you were negotiating with limited or missing instructions
- you were trying to find a package deal/a political solution

When you are there, let me know, take you time".

ANNEX III INTERVIEW GUIDE

General Approach

The interview seeks the description of situations and tasks in which intuition and quasirational cognitive processes are induced, and the cognitive response of the interviewee to such situations/tasks.

The interview will be minimally directive, viz. it will be directive at the beginning in the sense of evoking a negotiation situation which our theory of tasks predicts to induce intuitive or quasirational cognitive processes. Once this is done, the interview will be minimally directive, in the sense that the interviewer's task will be limited to "establish[ing] and maintain[ing] a state of evocation in the interviewee" (Urquhart et al 2003:67). As Urquhart et al note, the interview "should be unstructured and focused but undirected" (ibid, 70).

Question types should be limited to "what" and "how", and not to "why" since such questions entail justifications and rationalizations (Urquhart et al 2003:68).

Duration:

The interview should not last more than 60 minutes, and should deal with between 1 and 10 minutes of behavior (Urquhart et al. 2003:82).

Beginning of the interview:

"Thank you very much for accepting to participate in this interview which aims at exploring and understanding better how negotiators experience a negotiation. I am interested solely in the process and not the substance of the negotiation you carried out.

I will ask you shortly to remember specific, short but real negotiation events in which you have been actively involved. I will guide you gently through this remembrance exercise, and my role will be limited to that.

It is important to note that there are no good or bad answers. Uncertainty, hesitations or "hitting the wall" are welcome in this process. A judgment on why and how you did so and so, or why you did not do so and so is not part of this research exercise, which will focus instead on what and how you did something.

Everything you will say will be anonymized and any possible substance or person-related comments will remain confidential. Your comments will be recorded and kept confidential. You will have access to the transcript and may decide to correct or delete the substance or person-related comments you made.

The style will be both non-inductive (I am not interested in the content of the negotiation) but directive (in the sense that I shall be helping you stay in the singular experience you will be exploring).

Though this method has drawn some inspiration from some psychotherapeutic methodologies, the approach is not psychotherapeutic in its aim and focuses only on **how** you thought and carried out negotiation. Justifications of your actions are not part of the interview process either. In that respect, the research project is not interested per se in the outcome of your thoughts and negotiation actions, viz in their failure or success. The crux of the interview is how you thought and perceived the situation. The good side of this is that there is no implicit or explicit judgment on your performance.

However, it will be very important you to be as authentic as possible in your recall, viz a "I don't know" response will be better than making up a story.

None of these circumstances will be threatening or painful, though they may have been challenging for you.

Before we start the interview, I'd like you to please confirm that you've given your consent."

Key starting question:

"I would like to suggest, if this is fine by you, that you take the time to let come back a precise moment in your professional practice when.... Is it OK for you? Take your time. Don't tell me story, just put yourself back into the situation and tell me exactly what you did"

Additional questions (based on: Petitmengin, 2001; Urquhart, et al., 2003; Maurel, 2009; Vermersch, 2009; Vermersch, 2012):

Checking the context: "What did you see, or hear, or think, or whatever?"

Stopping on a moment: "would you agree stopping on...?"

Continuing the action: "and when you do X, what do you do?" or "when you do X, what do you start with?"

Clarifying: "when you say you did X, what did you do?"

Reflecting:

"How do you recognise that...?"

"What is been given to you, maybe or maybe not?"

Facing a no recall: "No problem, just tell me which type of impressions come back or "it doesn't matter/no worries. And when you don't remember, what do you remember?"

Facing a non understanding: " No problem. And in what you don' t understand, would you agree to tell me what you understand?"

If there is no recall: " it doesn't matter, it can come back later, and if this is the case, just let me know"

Fragmenting: "When you do X at that moment, what do you do? or When you do X, how did you do it? "

And when you do X, what do you start with?"

Expanding: And when you do X, is there anything else which come to you?"

Duration: - "and before?"; "and after?"

When informant "knows" something: "how do you know that?" ; "when you know X, what are you referring to?"

ANNEX IV ANALYTICAL GRID

1. Analysis of the data.

After the interviews were completely transcribed and read several times, extracts which contained potentially exploitable elements in accordance to the SJT analytical framework were put in the boxes of the above analytical grid. The grid gave information about the task environment (the task itself, its level of uncertainty, its nature (substance or human-related), the stage of the negotiation and the expected cognitive response (in accordance with SJT). A second part gathered elements of the interviews which pointed to the actual cognitive response (both in terms of cognitive strategy and cognitive tactic). A last column was used to write questions, possible explanations of the response and any other relevant information.

The coding of the extracts was guided by the indicators set out in the methodological chapters. Though no other researcher or helper verified the coding, it was assumed that these indicators gave enough information to secure their adequate classification in the grid. When Hammond used a qualitative approach to cognitive processes in his later books (Hammond, 1996; Hammond, 2000; Hammond, 2007), there appeared no shared coding of his findings.

All the information and quotes in the analytical grids of the 26 interviews were read several time and analysed to see to what extent emerging themes appeared. When the latter were found and were supported by several converging quotes, these themes became the different chapters around which the analysis of the findings took place.

2. Example of use: respondent 6 (Draft)

<u>Task environment</u>					<u>Actual cognitive response:</u>			<u>Explanations and/or graphic representation</u> (including zones of implicit and tacit knowledge)
1° negotiation environment/task enquired about 								

² C= correspondence; CP=coherence; A=analytical, I=intuitive, QR=quasirational

<p>counterparts on the other side, they were very tough negotiators.” (P6:12-14)</p> <p>“we prepared just in advance, an hour before” (P6:16)</p> <p>“[both sides] equally keen-because we were fed up with these negotiations, we were doing them for 2 years and we actually concocted a sort of deal” (P6:28-30)</p>								
<p>Perception of the participant of the negotiation preparation (P6:55-56)</p>						<p>“I felt very deeply this was the wrong approach and we weren’t ready.” (P6:57-58)</p> <p>“I didn’t think that what we were going to get out of it was</p>		<p>Emotional perception of the situation</p> <p>Intuitive understanding of</p>

						going to be adequate. ”(P6:62-63)		the situation
<p>“adequate”, how did you know? (P6:71)</p> <p>Judgment of the current negotiation process by P6</p>	Uncertain	S	During negotiation	Cp-A/QR	<p>Judging adequacy of negotiation proposal</p>	<p>“there are criteria, it was in [field] [...] the criteria are actually very clear, and when you apply them to a specific case, you know, you can have a feeling³, meaning it takes” (P6:72-74)</p> <p>“I found this in any subject I have done as a lawyer [...] but it would take up to a year to become confident, you know, to develop a feeling, a gut feeling about something and, and, I just knew, I could feel it, that, that, this draft provision, or this one, or what they were going to suggest, it wasn’t</p>	Cp-I/QR	<p>lack of time--)</p> <p>Weak cognitive mode (mode 6 or 7);</p> <p>appeal to gut feeling based on experience;</p>

						finished.” (P6:74-78) “we were driving forward, and there was no time , it was the whole deal, you know, this was a big deal and we were just saying: “this is outstanding, what do we do?”.(P6:89-91)		
						“there’s this magic moment in a negotiation where you suddenly realize that it’s gonna work, and in this one, we [inaudible] a feeling for it, but it wasn’t complete yet, even though we may have had that magic moment, we didn’t have yet” (P6:92-95)		Possibility of insight? (mode 7)
Deciding on a clause	Intermediate certainty	S	During	A/QR	Negotiating and	“there is nothing saying ⁴ : “in this	C-QR/I	Absence of legal criterion

(P6:122)					deciding the clause	<p>situation, it should be this period”, it’s: “you should not retain the data longer than it is necessary and proportionate” . So it’s a combination of feeling and facts.” (P6:126-129)</p> <p>“you just feel, as well as with all the academic literature and so on and the opinions produced by...by [institutions’ name] that a shorter period is much safer.” (P6:130-132)</p> <p>“You know, I reckon, if you’ said finally 2 years, I would have been fine. You know, to tell you why, is impossible” (p6:142-143)</p>		Decision based on experience (“feelings and facts”)
“it was my job, and it was the job of the						<u>Espoused theory of action:</u>		

lawyers, to be pushing, to adjust the deal so it is defendable ". (P6:154-155)						<p>A case must be defendable.</p> <p>"Ah?! You feel you can, well, for me, if we get taken before the court, we can win the case. "Defendable" is the right word because it's not...the word doesn't mean "sure", it means "adequate", it means you could, if you did it, you could effectively and with a good chance go into court and come out saying: "yes, we were right" (P6:157-161)</p> <p>= QR/I search for coherence</p> <p>Basis:</p> <p>"Ah, yes it was experience, because it was...I had been doing [field] already for a couple of years and maybe I would have been better now after all this time, but, ..., the feeling it to be defendable is, you look at all the facts , you know," (P6:164-166)</p> <p>[patterns from other cases, similar cases, or analogies?]</p> <p>A lot, I think lawyers think that way, and particularly British lawyers who are trained more on a case by case basis, than on a principle basis like continental lawyers . So, the way I would think is always looking sideways at other cases that have happened. [current case]. What one is looking at, and is that's going in the same time, [technical details] so I had clear analogies in my mind I could readily apply.(P6:184-190)</p> <p>QR/I search for coherence</p>		
Facing a dilemma (P6:191)	Uncertain	S	End	I	Walking away	C-I	I discussed with my colleague and I said: "we have	Mode 5 (discussion with

<p>Choosing between reworking a corrupt text or walking away following use of flyby technique</p> <p>“the flyby, [...], where you, what they did is they not only took everything that was agreed, they re-wrote it,” (P6:233-235)</p> <p>“in the background, there was this guy who want to go home to see his baby, and there is nobody to ask, in terms of legal certainty, it was a nightmare, because, to reopen this, and can you imagine, going through all this, [showing the document], you know, we would have been going until 7 o’ clock the following morning, I was tired, there was no guarantee I could</p>							<p>two alternatives: we can either do this, and have a risky outcome, or we can take a bigger risk and we can walk out”, and maybe I wouldn’t, I didn’t how much I would have thought of a walk out if I didn’t have this colleague, that I couldn’t [laughter] , I just knew I couldn’t persuade him to stay all night.(P6:254-259)</p>	<p>other colleague):</p>
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guarantee of the result.”(P6:239-244)								
Decision whether the deal was defensible (P6:317-319) “Let’s say there was stuff which wasn’t strictly legal, [technical policy and operational details], there I was very comfortable because I had no idea and there I simply took advice. That was, that was, in a way I was more comfortable than if I’d been a head negotiator from that DG because I recognized that I had no idea about some of the complicated substance. And if they’d agreed on what they thought	Uncertain	S	End	C-I/QR	Accepting clause	“it was people’s I trusted. I mean, for me if you are in a negotiation team, you should be able to trust your colleague” (P6:359-360)	Intuitive trust	

<p>was right, that's all I needed. ..., what we had on that session, is a text like this [interviewee shows the document], but with parts that were, you know the final negotiating opened bits, with squares, brackets and underlinings and so on, and so it wasn't I had to worry about very much about the whole thing, I only had to worry about specific things"(P6:324-334)</p>								
<p><u>Methodological note:</u></p> <p>But I suppose, by talking through with you, what really, probably, now I feel a bit happier about it, because I hadn't articulated it before,(P6:367-369)</p>								

Trusting your guts (P6:378)							<p>Espoused theory of action:</p> <p>“Yes, well, yes, I think he’s right in the sense that I found negotiating courses incredibly useful, especially the stuff about adding value, you know, and understanding the other side, but you get to a point where you’ve got to , he said: “trust your guts” (P6:379-382)</p> <p>“I would agree with that thing because finally you have used all the techniques on the way and there’s come a point where you’ve got to say⁵: is this going to, do we accept it now? Because finally a negotiation is a compromise, and that’s when it comes in.” (P6:387-390)</p> <p>“it’s a feeling of conviction” (P6:383)</p> <p><u>Basis:</u></p> <p>“I think it’s a question of personal conviction, whatever you call it, sixth sense, guts, it’s a feeling inside you, so it is as if it’s inside your chest rather than in your head [...] so I would almost say rather than “guts” “heart”.(P6:398-400)</p>
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<p>Quote from Kennedy Round (negotiation is a subjective affair and at the end you just take the best guess") (P6:401-402)</p>						<p>Intuitive or analytical trust?</p>	<p>"I find the first part of the quote easier than the second. (P6:403-404)</p> <p>"for me you have to feel you are trusted, by the other side, sufficiently for that deal. You know, there had to be, because these weren't one offs, there were things which had to be lived with afterwards, so...so...I agree, I think it's very subjective (P6:409-412)</p> <p>It's emotional and subjective⁶ (P6:419)</p>	
						<p>"several meetings and I saw his presence as nothing but positive. So I'd seen him in action face to face dealing with his own side and I could, I felt that he was...he was...not on our side but he was in favour of reaching a deal" (P6:423-425)</p>		

ANNEX V Additional hypotheses

Note: references point to elements identified in previous research

	Cognitive strategies (coherence or correspondence)		
	Intuition-inducing	Quasirationality- inducing	Analysis-inducing
Depth features	<ul style="list-style-type: none"> - Lack of training in negotiation - Value-creation (intuitive creativity); - On the spot decision on uncertain matters; - Unconscious search of patterns for coherence of arguments or seeking patterns of behavior; - International relations-related and ideologically based political issues (Hammond & Brehmer, 1974, pp. 5-7; Hammond, 2007, pp. 5-7) - Lack of knowledge about issue at stake (Hammond, 1996); - other uncertain task environments (such as: new negotiation partner); - assessing accurately the behavior of the other party, 	<ul style="list-style-type: none"> -gauging responses to the classic negotiation dilemmas (information, pressure, dependency, credibility, representation, power) -Dealing with data overload -diagnosing motivations and interests of the other party's target/resistance point or BATNA during the preparation based on the experienced or predicted rationale behind them or on the basis of indicators -assessing the behavior of the other party; in particular its signals -decision based on a pattern of evidence (Hammond, 1996, p. 238; Hammond, 2000, p. 88); if unconscious use, then 	<ul style="list-style-type: none"> - preparing an agenda and a schedule; - analyzing a legal basis; preparing legal arguments; - preparing arguments (in general) - analysing coherence of the arguments from the other party - comparing information, interests, priorities or key issues - finding justification criteria for solutions found at the table - giving feedback and justification of decisions to sender - value creation (creative rationality) - necessity of following a strict negotiation mandate - Quantitative preparation (statistical analysis or economic forecasting) or review of negotiation offers (our own's

	<p>in particular:</p> <ul style="list-style-type: none"> *its signals, when using more signals; * the reality behind a potential lie, threat or bluff - Natural social encounters (Hammond, 200, p. 40) <p style="text-align: center;"><u>Endogenous disruptions</u></p> <p>(induces unconscious reliance on experience)</p> <ul style="list-style-type: none"> - Ideological or value-based confrontation of ideas; - Competing value system - Bluff, threat and other deceptive tactics - Time constraints (Hammond, 2000, p.79); - Negotiation preparation as part of a heavy workload (Hammond, 2000, p.79) <p style="text-align: center;"><u>Exogenous disruption</u></p> <p>Noise, cramped and other difficult physical conditions for negotiating (Hammond, 2000, p.79)</p>	<p>intuition;</p> <ul style="list-style-type: none"> -information gathering phase -International relations-related and political issues 	<p>and the other party's)</p> <ul style="list-style-type: none"> - using indicators to evaluate hardball tactics
Surface features (mode of presentation of information)	<ul style="list-style-type: none"> - Use of emotions or symbols or relationships between abstract ideas (Hammond, 2007, p. 180) - Pictorial expression or representation of argument/interests/motivations (Hammond 2007, p.84) 	<ul style="list-style-type: none"> - Presenting negotiation-related information with bar graphs (Hammond 2007, p.84) 	<ul style="list-style-type: none"> - Reviewing a (draft) agreement

	<ul style="list-style-type: none">- Diagrammatic representation (Hammond, Hamm, Grassia and Pearson in Goldstein & Hogarth 151)- The narrative presentation of the other party's interests etc.		
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