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**NEGOTIATING with LOGICAL-LINGUISTIC PROTOCOLS
in a DIALOGICAL FRAMEWORK**

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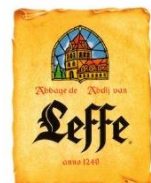
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To my family

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*“They try to kill off competition;
Then, bankrupt take an expedition,
For, having slashed their prices downward,
Their best direction’s out of townward;
If one of them won’t cut the price
His brothers won’t be overnice,
For if the customer is tight,
The goods he gets will serve him right;
The masters now make shoddy wares:
If they can sell ’em then who cares?
But such a business will not keep:
To by stuff dear and sell things cheap;
Some tradesmen underestimate
A deal, then take the city gate.
Whoever loves bargain, he
Won’t get much for a guarantee.
They makes so much a little cost;
They sell it quick and nothing’s lost;
They profit from a slick veneer
Now honest tradesmen disappear.”¹*

I would like to thank all the people who teach me the ‘game’ of negotiations, even when the *honest tradesmen disappear*. However, he is just a possible (as an option) element of the game. What is really important and exciting is the game itself. I thank my family and my teachers for teaching me how to play, to love the game of Life: the art of ‘trading’ and ‘negotiating’ with Life every moment of my life. Thank you, family and teachers, for teaching me to enjoy Life!

¹ BRANT, S. (1494). *The Ship of Fools*. Quoted by MARSH, P.D.V. 1984: 387.

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Lastly, I would to thank all the readers of this work. Thank you for your time!

Even,
What has been, that will be; what has been done, that will be done.
Nothing is new under the sun!
Ecclesiastes 1, 9²

There may be other knowledges to acquire, other questions to consider,
starting, not from that what others have known,
but from what they have ignored
MOSCOVICI³

² USCCB (2011). *The New American Bible, Revised Edition (NABRE)*. Retrieved from <http://www.usccb.org/bible/ecclesiastes/1>, checked on April 3, 2017.

³ Our translation for: “*Puede que actualmente haya otros conocimientos que adquirir, otras cuestiones que plantearse, partiendo, no de lo que los demás han conocido, sino de lo que han ignorado*”. S. MOSCOVICI. Quoted by MORIN, E. 1986: 20.

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INTRODUCTION

Even when, “nothing is new under the sun” (Eccl. 1, 9) “There may be other knowledges to acquire, other questions to consider, starting, not from that what others have known, but from what they have ignored” (MOSCOVICI)⁴ by choice or by chance, that is not relevant, the question is thinking about something un-thought at the moment. That is the hazardous passion developed here and you are invited to share it.

NEGOTIATING with LOGICAL-LINGUISTIC PROTOCOLS in a DIALOGICAL FRAMEWORK is the result of years of reflection. Some time ago, working in commodities we could feel how difficult it was to decide the order of the arguments used during the negotiation process. As in a Bridge game, we translated the arguments according to the rules of Bridge and saw how it worked to deal with them as in a Bridge hand, playing them and seeing what would happen. The results were impressive. We were thrilled about the potential for improvement on the negotiation process. We decided to investigate deeper on the possibility to undertake negotiations applying Bridge rules to organize the order of arguments. This was the subject of a previous paper (2011): *The BRIDGE. A bridge TOWARD NEGOTIATIONS*⁵. It was the first formal attempt to establish a protocol to know the best order to use the arguments during the negotiation process, by converting them into cards and play a Bridge hand. However, as will be shown later, the study revealed some limitations. This subsequent work is an attempt to reduce these limitations.

The new work should be more scientific and precise, so the decision was taken to start a PhD in Logic as the best framework and tool to develop a research on this subject. Following this path, the idea of turning arguments into cards to play a Bridge hand expanded progressively and went one step ahead just exploring: players, cards,

⁴ Our translation for: “*Puede que actualmente haya otros conocimientos que adquirir, otras cuestiones que plantearse, partiendo, no de lo que los demás han conocido, sino de lo que han ignorado*”. S. MOSCOVICI (see footnote 3).

⁵ MARTÍNEZ, M.D. (2011). Master’s thesis available at the Library of Economics, Social, Political and Communication Sciences (BSPO) at the Catholic University of Louvain (UCL).

deals and the information hidden in the player's announcements and in the cards and/or in the deals. This new angle brought the research to the neurolinguistics patterns –NLP- and cryptic languages, like Russian Cards (van DITMARSCH, 2008).

Finally this PhD thesis is an attempt to think how to create logical dialogues to tackle negotiations, meaning: solving conflicts from basic linguistic structures (conjunctions; disjunctions; conditionals) placed under a dialogue form as a cognitive system which 'understands' natural language and where there is a permanent feed-back between both.

This paper aims to show and to share just a path, not a conquered territory, to negotiate in a dialogical framework and remain always open to any possible improvement. It will be like a 'tragedy' in three 'acts'. Each 'Act' will be a 'conceptual mimesis' of the arguments used during the negotiation process to produce a 'catharsis', an improvement on the negotiation process. The three 'acts' have a spiral form, the first one is the Bridge, the second the Neuro-Linguistic Patterns (hereunder, NLP) and the third is the cryptic language Russian Cards. Therefore, the procedure of this thesis will be to study each part in accordance with its contribution and its limitations. Step by step our task will be to address ourselves to the limitations with the aim to reduce of them. Conclusions will be just to show a possible map, a guide to choose the order of arguments in negotiations.

The structure of each 'Act', as a step of this path, will be:

1. A presentation on the appropriateness and accommodation of the specific subject in the whole of the research.
2. Application to prepare negotiations.
3. Lights and shadows, or some interesting considerations to keep in mind for planning negotiations.

The case chosen for study as a model for this ‘experiment’ is the *1st Camp David Accords*.⁶ And exhaustive and aseptic analysis of these *Accords* can be found in the annex in order to have available the experimental frame⁷. In order to preserve the rigour and the aseptic nature of this research we do not apply any framework that will be applied later, so you will not find any application of the *Game Theory*, neither NLP nor dialogical semantics used across this analysis of the *1st Camp David Accords*. Preliminary research work was done on this negotiation as mentioned above. The same subject was chosen to give continuity to the started investigation. That was the reason, and not the idea that this theory is only applicable to international negotiations. This theory is for negotiations, whatever they are.

The methodology has been the one that is appropriate in Logic: many paper reflections, thought drafts, therefore not included here because as drafts they do not have a decisive character for the final thesis; specific sources⁸ such as: manuals, books, articles and documents about the different subjects tackled along of this paper; and personal reflection comparing the distinct results and information. The purpose of working with specific sources has been to be as rigorous as possible while opening a new theoretical way into negotiation analysis and also into applied logic. One of the difficulties of opening a new way, no matter how fascinating it may be, is that no sources exist while it is being built. As you know, the instrumental nature of logic was recognised as early as the *Organon* by Aristotle. In fact, logic has been a tool for philosophical studies since Aristotle, even when many logicians see logic only as a family of formal systems. Logic is not applied to philosophical problems as an engineer

⁶ A published presentation by MARTÍNEZ, M.D. (2012) is also available about this subject.

⁷ To judge our success in establishing a protocol to know the best order in which to use the arguments during the negotiation process, we needed a ‘territory’ where our conclusions could be verified. It is why we chose a completed negotiation case to guarantee an objective application, because there is no possibility to change the events. Without this document in the annex it would be quite difficult to assess this research in terms of right or wrong, because the ‘semantical true’ would be unknown.

⁸ Note that in this thesis there are two sections named Bibliography: one at the end of the ‘general’ part and another attached to the annex. There you can find specific references together with other apparently ‘repeated’, these ones are shared sources for both research approaches.

may apply some techniques. Nevertheless, many logical notions transcend the particular formal systems and logic can offer there a rigorous language -with precise meanings- to study philosophical discourses and discourses in social and human sciences. Moreover, it is a great help for enhancing precision in communications. So, modern logic deals with a wide range of intelligent interactions across academic disciplines: from humanities to natural sciences. This dynamic turn involves the logical dynamics (dialogues as a form of reasoning; dialogical logic; study of knowledge; communication process; etc.). In this sense, van Benthem was clever saying:

Logical dynamics is a way of doing logic, but is also a general stance. Making actions, events, and procedures first-class citizens enriches the ways in which logic interacts with philosophy, and it provides a fresh look at many traditional themes. Looking at logic and philosophy over the last century, key topics like quantification, knowledge, or conditionality have had a natural evolution that went back and forth across disciplines. They often moved from philosophy to linguistics, mathematics, computer science, or economics (...). (van BENTHEN, J., 2011: 268).

Thus, there is an arsenal of fields to apply logic. Thank you for your understanding along this path of applied logic on a new field: negotiations.

Therefore, this work consists of a creative and an innovative effort full of risks. The experiment will confirm whether that innovation and risk were worthy and the reader will judge on the degree of accommodation.

In the following pages you will discover a new opportunity to apply the logical dialogues to deal with negotiations, to solve conflicts (as objective application) and even to serve peace (as a subjective option, since tools do not have an ethical value in themselves).

ACT I: THE BRIDGE

As has been said before, this paper is the continuation of a previous one -*The BRIDGE. A bridge TOWARD NEGOTIATIONS* (MARTÍNEZ, M.D., 2011)-. Thus, the next pages will be a sort of summary of the above, in order to enable a right support for the present reflection. We will take out the most relevant data for our present research. Anyhow, the complete text is always available to be consulted at the Library of Economics, Social, Political and Communication Sciences (BSPO) at the Catholic University of Louvain (UCL).

When we dealt with the research about Bridge and negotiations in the past, we conceived it as a double spiral, like DNA and Bridge as its linkage. One spiral was the ‘scaffold’, named so because it is the theoretical negotiation axis that supports a possible rational explanation about the implementation of negotiations. Consequently, the natural limit of our ‘scaffold’ was its implementation (once the theory is implemented we do not have any possibility of changing the events): the ‘scaffolding’, the other spiral, which supports the negotiation in itself. Both spirals are simultaneous and intertwined. As a consequence, they cannot be understood separately and they exist always together –they are the two sides of the same coin–.

The way used to analyse the ‘scaffold’ was theoretical-deductive (we started from theory to achieve a practical application). All negotiations start with a decision, the decision of negotiating about something, thus Chapter 1 was an analysis of the *Decision Theory*. However, this analysis was necessary but not sufficient because we needed our decision to be rational and therefore we showed that the most rational decision would be the intersection point between the ‘*f(optimization)*’ and ‘*f(satisfaction)*’. As satisfaction cannot be objectively calculated (the level of satisfaction is always subjective), the rationality of the decision remains on the side of the objectivity, that is, in optimization. In games both are mixed, the result of a game speaks about its optimization and the player himself speaks about his satisfaction. Therefore, our second step was the analysis of this rationality by means of *Game Theory* –Chapter 2–. Once we completed the

ground of a negotiation, which includes the decision of negotiating something and its rational ground, we were ready to analyse the negotiation as a theoretical approach. The intended purpose of this analysis was to answer the implicit question in this chapter: *'Is the Game Theory useful to make rational decisions in negotiations?'* –Chapter 3–. Up to now we have been building the foundations (i.e. the first three steps of our spiral) and we concluded that the rationality of decision-making in the course of a negotiation can be addressed by the rational study of the 'game' that represents the negotiation. But, *'what 'game' in particular will be studied? and 'why are we choosing one 'game' and not another?'* This was the content of our next chapter, where we dealt with the fourth and last step of our 'scaffold' –Chapter 4–. That was the time to answer the question: *'Is the Bridge a useful game to make rational decisions in the world of negotiations?'*

From this 'scaffold' we recover Chapter 4, turned here into Chapter 1.1: The Bridge. Is it a useful game to make rational decisions in the world of negotiations? The aim of this chapter is reduced to know and understand the rationality that is implicit in Bridge -and not to become expert Bridge players-. So the length and depth of this chapter is restricted according to our goal.

For the other spiral, 'scaffolding', the procedure toward knowledge was empirical-inductive (we start from a specific case and we reach a feasible theory). So we tackled this practical spiral from a case study: the *1st Camp David Accords*. This was a longer, dense, comprehensive chapter that was analysed in the most sceptical way. Our goal was to know whether or not Bridge was a possible internal bridge ('linkage') between the theoretical framework ('scaffold') and the practical cases ('scaffoldings'). In order to accomplish that, we needed to study a past case (future cases cannot possibly prove a hypothesis) and analyse it following an approach not based on the *Game Theory*. It was done so because we suspected that Bridge was our 'linkage' and we could have matched up our hypothesis with our analysed case in *Game Theory*. If we did that, then the degree of accommodation between the two spirals could have been conditioned.

You will find in the annex the study case (‘scaffolding’): *1st Camp David Accords*.

Then we had the two spirals defined and we could ask about the possible element of ‘linkage’ between both. The element proposed as bridge was the Bridge game. Thus, this part was an application of the Bridge game to a case of negotiation. We chose to apply Bridge to the *1st Camp David Accords*. With this application we made possible to verify whether the Bridge was a feasible bridge in the analysis of negotiations. In other words, we wanted to confirm that Bridge could be a possible bridge between the two spirals. So, this section was an application of the former Chapter 4 (present Chapter 1.1). Our implicit questions were: *‘Is the Bridge game the element which bridges both spirals in the specific case of negotiations?’ ‘Could it be a tool for a rational analysis of negotiations?’* In order to answer these questions we proposed the application a Bridge game to the previous study case *–1st Camp David Accords–*.

We recover here this study of the ‘spirals linkage’ as Chapter 1.2: Bridge application to the *1st Camp David Accords*.

Finally, the conclusion was a reflection about the following: *‘To what extent is it possible to consider Bridge as an element for a rational analysis of negotiations?’ ‘What light does it provide to our understanding of negotiations?’ ‘Which are its limitations?’ ‘How could we overcome these limitations?’*

We bring up these reflections here, turned into Chapter 1.3: The Bridge. A bridge toward negotiations. Lights and Shadows. This chapter will not be a duplicate of the former ‘Conclusion’. We expect to have ‘improved’ something during this second look at the subject. Anyway, the ‘improvement’, in the case there is some, will be clarified through the pages of this research. At the end of this chapter the great shadow will be suggested, where we would like to throw some light along this paper.

In this way, our Act I, composed by three chapters, will be the path to discover why the Bridge game is useful to make rational decisions in the world of negotiations and where its limitations are.

Chapter 1.1: The Bridge. Is it a useful game to make rational decisions in the world of negotiations? [This chapter is taken from MARTÍNEZ, M.D., 2011: 28-35.

You will find in square brackets the additions and/or alterations to the original text.]

We suggest studying the Bridge game because we believe that it is the best to make rational decision in the world of negotiations ‘*Why do we believe that?*’ Because the *Game Theory* is based on the analysis of the microcosm of games and the Bridge is a communication strategic game⁹, then, it could be probable the best reflection of a negotiation. In order to answer this question it will necessary to analyse the Bridge, following a step by step process, so we can prove the Bridge is a game useful to make rational decisions and more specifically, it is the best illustration about what happen in a negotiation. To do, we will answer three questions: ‘*What is its ontology?*’; ‘*What is its epistemology?*’ and ‘*How can we say that the Bridge belongs to the Game Theory?*’

The Bridge ontology

Before starting with the analysis of the Bridge ontology we need to define the concept of ‘*ontology*’. Ontology is “*a branch of metaphysics concerned with the nature and relations of being.*”¹⁰ But, in the case of the Bridge game ‘*which will be the nature and relations of its being in itself?*’ To answer this question we will use a much modern definition of ‘*ontology*’: “*an explicit specification of a conceptualization*”¹¹ Therefore, we need to describe the underlying conceptualization in the explicit Bridge specification.

⁹ Cf. Robert **Kast**, *opus cit.*, p. 11.

¹⁰ Definition of word ‘**Ontology**’ in: *Encyclopædia Britannica*, 1st meaning. Source online: <http://www.britannica.com/bps/dictionary?query=ontology> Authorized website of the *Encyclopædia Britannica*.

¹¹ Thomas R. **Gruber**, “*Toward Principles for the Design of Ontologies used for Knowledge Sharing*”. In: *Formal Ontology in Conceptual Analysis and Knowledge Representation*, by Nicola **Guarino** & Roberto **Poli** (eds.). Norwell (Massachusetts), Kluwer Academic Publishers, 1993, Source online: <http://itee.uq.edu.au/~infs3101/Readings/OntoEng.pdf> Authorized website of the School of Information Technology and Electrical Engineering at the University of Queensland (Australia).

The explicit Bridge specification responds to its conceptualization. This is the relation by means of a pack of cards equally shared between all players. The nature of relations between beings (players) appears covered behind its conceptualization, the conceptualization of a common language between the players. Therefore, the ontology, which we are talking about, will be a ‘semantic ontology’ since “*A semantic ontology is a conceptualization, common to a community of agents that understand natural language, of the categories and relations that pervade the agents’ environment as a whole. It can be used to specify the logical form as the truth-functional meaning of agent messages embedded in natural language. (...)*”¹² Then we will analyse the Bridge language to know its ontology, its being.

The Bridge language is common to its four players, but the players are divided into two pairs (named: North-South, the host pair, and East-West, the visiting pair). The relation between pairs is non-cooperative, but inside the pair they keep a cooperative relation. Through a conceptualized language, common to the community of players, the players reach an accord about which will be the trumps (not-trumps is other possibility of trumps). The game’s object is to reach the best communication possible between players of the same pair that use a common language, which is also known by the other pair. The objective is to reach the maximum of possible tricks from the probabilistic and combinatorial calculus. Apparently, the Bridge is a non-cooperative game in itself, but in the Bridge, the winner is the pair that in more turns has reached the 100% of the possible tricks, for that is strictly necessary a kind of ‘collaboration’ between the pairs. [In an ideal hand, which is quite habitual in Bridge], when a pair [proponent] obtains a trick of surplus is not because it has played very well, it is always because the other pair [opponents] has played wrongly; and when a pair [proponent] don’t obtain all the possible tricks is not because it has played wrong, it is always because the opponents

¹² Luc **Schneider** & Jim **Cunningham**, “*Ontological Foundations of Natural Language. Communication in Multi-agent Systems*”. In: *Knowledge Based Intelligent Information and Engineering Systems*, by V. **Palade**, R. J. **Howlett** & L. **Jain** (eds.). *Lecture Notes in Computer Science*, 2003, Vol. 2773, p. 1403-1410. Source online: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.58.3373&representative> Authorized website of the NEC Research Institute, Princeton (New Jersey), it is a scientific literature digital library and search engine that focuses primarily on the literature in computer and information science.

have played very well. Therefore, in the Bridge there is always an intrinsic collaboration process. Every obtained trick on top or below average will be a 'gift' (on top average) or a 'lost' (below average), but never the game in itself. To understand this apparent paradox it will be necessary to analyse the Bridge epistemology.

The Bridge epistemology

We will start by offering a definition of 'epistemology'. Epistemology is "*the study or a theory of the nature and grounds of knowledge especially with reference to its limits and validity.*"¹³ If the nature of the Bridge is founded on the mathematical principles, then in order to know the structure of Bridge it will be necessary to apply reasoning in accordance with mathematical logics' principles, as 'logic' is "*a science that deals with the principles and criteria of validity of inference and demonstration: the science of the formal principles of reasoning.*"¹⁴ Therefore, our mission will be to discover the logic that lies behind its ontology, as "*(...) Formally, an ontology is the statement of a logical theory.*"¹⁵ Therefore, our question shall be connected with the underlying Bridge logic. This logic will be founded on the probabilistic combinatorial mathematical principles.

[...] the Bridge is played by four players, and as the pack of cards has 52 cards, and then each player will have 13 cards. This 13 cards are obtained by random distribution ($C_{52}^{13} C_{39}^{13} C_{26}^{13} = 52! / 13! 13! 13! 13!$)¹⁶. This is the first step of the game and the only hazardous. From here, all the others steps will be an application, more or less correct [the correction degree only depends of the player qualities], of the

¹³ Definition of word 'Epistemology' in: *Encyclopædia Britannica*, 2nd meaning. Source online: <http://www.britannica.com/bps/dictionary?query=epistemology> Authorized website of the *Encyclopædia Britannica*.

¹⁴ Definition of word 'Logic' in: *Encyclopædia Britannica*, 1st a (1) meaning. Source online: <http://www.britannica.com/bps/dictionary?query=logic> Authorized website of the *Encyclopædia Britannica*.

¹⁵ Thomas R. Gruber, *opus cit.*

¹⁶ Cf. Émile Borel & André Chéron, *Théorie Mathématique du Bridge à la Portée de Tous*. Paris, Éditions Jacques Gabay, 2009, p. 38.

probabilistic combinatorial mathematical principles. As the game implies to get the highest number of possible tricks, every time that a player plays a card, the others must play a card too. The played cards will be only those which fulfill the rules of the game: they must always play a card of the same suit. If they don't have any, then there are two possibilities: either they play trumps or they play other suit. The winner of the trick is the one who has played the highest of the played suit or who has played the highest of the trumps, if they are playing trumps. If they are playing not-trumps then, the winner trick will always be the highest of the played suit. We will have always the following situation: whoever starts the game will choose a card (C^1_{13}), and then the next players will have two possibilities:

1. If they have cards in the played suit, then they will choose from those in the played suit ($C^1_{n=\text{number of cards in the played suit}}$).

2. If they don't have cards in the played suit, then they will choose from others cards. Again, there are two more possibilities:

2.1. If we play at trumps:

2.1.1. Then we can play a trumps card ($C^1_{n=\text{number of cards in trumps}}$).

2.1.2. Then we can play a card of other suit ($C^1_{n=\text{number of cards in other suit}}$).

2.2. If we play at not-trumps: always we have the possibility to play any card (C^1_{13}).

Evidently, in every game, we have a smaller possibility (C^1_{13-n} [n=] number of played games, being n according to the chose case (case 1 or case 2 –2.1.1.; 2.1.2. or 2.2–)). Therefore, in each trick we have less possibilities of 'the possible' cases. This makes very important the choice of the card to play, because once a card has been played, that card will not be available for the next game. This makes really important to choose the card which is in 'perfect symmetry'. Any card has its value in itself, the value, is the same for each card and we need to know when to play them. This is the explanation of our paradox, this necessity of 'perfect symmetry' is the key to obtain the 100% of the possible tricks, and for that is

strictly necessary that each player plays the ‘symmetric’ card. Because of this we can say that the Bridge is a cooperative game but it is hidden behind a non-cooperative face.

Being the Bridge a game with such complexity: non-cooperative between the pairs, but at the same time cooperative between the pairs, ‘*can we say that the Bridge belongs to the Game Theory?*’

The Bridge belongs to the *Game Theory*?

According to the analysis [of the] [...] *Game Theory*¹⁷, we can conclude that the Bridge belongs to the *Game Theory*. Then, it will be a game: *non-cooperative/cooperative; two collective parties* (two pairs) and *one issue* (the game in itself). The goal is to achieve a specific effect by applying one strategy, and this achievement will be founded on the probabilistic mathematical calculus. In the Bridge, the hazard is only present at the moment of the distribution of cards, but never during the development of the game.

In fact, the Bridge belongs to the category of the ‘*ideal games*’¹⁸, being the characteristics of these games:

“(1) Common knowledge. There is full common knowledge of (a) the rationality of both players (whatever that turns out to mean), and (b) the strategy structure of the game for all players, and the preferences that each has with respect to outcomes.

The force of this condition is that a player ‘i’ knows something that is relevant to a rational resolution of its decision problem, then any other player ‘j’ knows that player ‘i’ has that knowledge. This is a typically taken to imply (among other things) that one player cannot have a conclusive reason, to which no other player has access, for

¹⁷ Cf. MARTÍNEZ, M.D., 2011: 20-24.

¹⁸ Cf. Edward F. McClennen, “*Rational Choice in the Context of Ideal Games*”. In: *Knowledge, Belief and Strategic Interaction*, by Cristina Bicchieri & Maria Luisa Dalla Chiara (eds.). New York, Cambridge University Press, 1992, p. 47-60.

choosing in a certain manner. That is, there are not hidden arguments for playing one way as opposed to another.

In addition, one invariably finds that the analysis proceeds by appeal to the following (at least partial) characterization of rational behaviour for the individual participant.

*(2) **Utility maximization.** Each player's preference ordering over the abstractly conceived space of outcomes and probability distributions over the events that condition such outcomes can be represented by utility function, unique up to positive affine transformations, that satisfies the expected-utility principle.*

*(3) **Consequentialism.** Choice among available strategies is strictly a function of the preferences the agent has with respect to the outcomes (or disjunctive set of outcomes) associated with each strategy.*

Following Hammond (1988), condition (3) can be taken to imply that strategies are nothing more than neutral access routes to outcomes (or disjunctions of outcomes); the latter are what preferentially count for the agent. In particular, then, if two strategies yield exactly the same probabilities of the same outcomes occurring, then the agent will be indifferent between those strategies.”¹⁹

We can recognize the Bridge ontology and epistemology in these three characteristics of the ‘*ideal games*’. Therefore, we can assume the Bridge as belonging to the *Game Theory*. But then, ‘*will it be a useful game to make rational decisions in the world of negotiations?*’

It should be noted that the term ‘common knowledge’ as is understood here, does not necessarily have the same meaning as it may have in the context of epistemic logic.

¹⁹ Edward F. McClennen, *opus cit.*, p. 47-48.

Is the Bridge a useful game to make rational decisions in the world of negotiations?

Following [...] [the] Decision Theory²⁰, the more rational decision would be found in the intersection point between the '*f(optimization)*' and '*f(satisfaction)*'. As the satisfaction cannot be objectively calculated (the level of satisfaction is always subjective) the rationality of the decision remains on the side of the objectivity, that is in the optimization, and as in the games both are mixed, and the result of a game speaks about its optimization, then the *Game Theory* will be useful to find the 'intersection point'. Furthermore, in accord with [...] [the] Negotiation Theory²¹, if the rationality of the decision-making, in the course of a negotiation, can be addressed by the rational study of the 'game' that represents the negotiation then we can state that the Bridge is a useful game to make rational decision in the world of negotiations.

At this point, it seems that our question is solved; but incisive minds [still] have another question: '*Why have we chosen the Bridge as game to make rational decisions in the world of negotiations and not any other game?*' There are two answers, one more theoretical and the other one more connected with life.

From a theoretical point of view, the Bridge fulfils the characteristics for a game to make rational decision in the world of negotiations. It is a cooperative game with two parties and same issue, but at the same time, the Bridge is a non-cooperative game. In short, even if the ideal game to negotiate is a cooperative game (collaboration-compromise), always the bargaining will be also a competition. In fact, in almost all negotiations, the real situation is a '*bargaining mix*'²²; in the agreement there is a part fruit of the collaboration and another part fruit of the competition. In addition, the Bridge is a non-hazard game. It is a perfect mathematical symmetry; where the use of 'dialog' intra-pair and inter-pairs is a ruled system where there is a constant maintenance of common knowledge²³. Also, the fact that the winner is the pair that in

²⁰ Cf. MARTÍNEZ, M.D., 2011: 15-19.

²¹ Cf. MARTÍNEZ, M.D., 2011: 25-27.

²² Cf. R. Lewicki, Bruce Barry & David Saunders, *opus cit.*, p. 38.

²³ Cf. R. Kiel & M. Schader, "Using Dialog-Controlled Rule Systems in a Maintenance Module for Knowledge Bases". In: *Annals of Operations Research*, by Peter L. Hammer (ed.). Basel, J. C. Baltzer

more turns has reached the 100% of the possible tricks, that entails that the intersection point of optimization and satisfaction is really very near, it is nearly placed on top.

From other point of view, the Bridge includes the characteristics of the life itself. If we analyse each instant of our life, we could see that we always have a partner, even hidden, but that provides us with something which we have not but that we really need in that precise moment of our life. At the same time, there is always somebody, even hidden, who doesn't want that we reach our goal. The elements that we have in favor or against our goal, they are the 'life's cards', it will depend on the way we play them, that will achieve a higher, or lesser, degree of optimization and satisfaction in our own life. If we are strong in one of the elements, we will struggle to lean on it, and consequently will [propose to] play at 'trumps'; if we are more or less strong in all the elements, we will try to lean on all, and then we shall play at 'not-trumps'.

Therefore we have chosen the Bridge because we believe it is the best to make rational decisions in the world of negotiations and in the sphere of life. The 'game of Life': the art of 'trading' and 'negotiating' with Life at every moment of the life. And the Bridge is the best theoretical representation of the 'game of Life'. [We will test it in the next chapter.]

Chapter 1.2: Bridge application to the 1st Camp David Accords [This chapter is taken from MARTÍNEZ, M.D., 2011: 71-81. You will find in square brackets the additions and/or alterations to the original text.]

[Before starting this chapter, please allow us to create a scenario for the application]

Let us imagine that we are on August 1978. It is summer time, we are enjoying our holidays and the telephone rings. The prestigious editor in chief of a foreign affairs magazine –who knows our great love of the Bridge and our great interest [in] [...] negotiations- proposes us the challenge of writing an article for his magazine. This article must be a prediction about what will happen, what will be the possible rational agreement at the next *Camp David Accords* (scheduled by the next month, September 1978). But this article will have a condition: the prediction can only be based in a virtual Bridge game played among the leaders reunited at the summit (Begin, Sadat and Carter). And we, perhaps because of the heat's drowsiness, perhaps because we are 'crazy' who loves logical challenges, we do accept. (MARTÍNEZ, M.D., 2011: 70).

[Remember that the objective information about what happened can be found in the annex document. This information will always be available to corroborate the Bridge application against our study case.]

The starting point for this chapter is two questions: '*Is this Bridge game, the element that bridges both spirals in the specific case of [...] negotiations?*' '*Could it be a tool for a rational analysis of [...] negotiations?*' To answer them, as we are proposing [...] [during the introductory pages to this 'Act'], we will apply a hypothetical game's Bridge on the 'future' possible agreement at *Camp David Accords*. So, the game starts and our only available information is the available literature about the history between their relationships and their preparation for future meetings. Both, information and literature are very weak because at this time (**this imaginary**

game took place on August 1978) the Israeli Government didn't allow to release to the general public the statistical abstract yearbook keeping it strictly confidential. This is the reason our data game cannot be founded on official sources. Therefore, this game will be based on our personal background on this matter.

A Bridge game starts with the identification of the two pairs: the North-South pair (host pair) and the East-West (the visiting pair). *'Who is North-South, the host pair?'* The one who plays at home, in this case, Carter and Begin (Carter is the 'Host' because the negotiations will take place at the USA, and the USA is the 'eternal' ally of Israel). Then, *'who is the East-West, the visiting pair?'* The visiting pair is Carter and Sadat (the alliance between USA and Egypt is really weak: in a historical perspective Egypt is a country under the USSR influence –we are still at the *Cold War era*–, and from the perspective of the interests, although they are not considerable, both the USA need guarantees for the Middle East raw materials and Egypt needs the financial aid from the USA).

Both pairs have now been identified. But, one of the players will play in both teams. *'Is that possible?'* In our case, yes, because we have a player who has the aim in itself (the goal of these negotiations is to reach the peace in the Middle East, and who really wants it is the USA), but is not interested in the object of negotiation (the object is the condition to achieve this goal, in our case, the occupied territories during the '67 War). Therefore, we are 'luck' and even our game will be more 'simple'. As the game deals with the object in itself, and not about the objective, the goal is the consequence of game but not the game. Then, as the USA don't take directly part on the object (necessary condition) and is the same player in the two 'force lines' (condition of sufficiency), we can 'eliminate' Carter from the game. Carter will be present in the game as 'hidden force', reinforcing the force of each one of the other players.

Summarizing, we are on the table. We have two real players: Begin versus Sadat. We have 52 cards (a pack of cards) which represent the object that is at stake

–the occupied territories during the '67 War–. We have the goal: the peace in the Middle East.

It is the moment to look at the cards. *'Who has what?'* Before the distribution, we have agreed that:

1. A pack of cards have 52 cards divided in 4 equal²⁴ suits.
2. Each suit will symbolize an aspect of the object (political, financial, social and cultural).
3. Each card will symbolize a rational argument in pro the object on a specific aspect. In fact, we will turn the rational arguments in pro the object into mathematical values –cards– and risk them based on rules of the Bridge game (these rules, as we have seen at the chapter [1.1], are a probabilistic combinatorial calculus, the hazard doesn't take never part).
4. The spades' suit will symbolize the political object aspect.
5. The hearts' suit will symbolize the financial object aspect.
6. The diamonds' suit will symbolize the social object aspect.
7. The clubs' suit will symbolize the cultural object aspect.
8. We have only one object to play: the occupied territories during the '67 War, but the territories are five: Jerusalem East, the Sinai Peninsula, the West Bank, Gaza and the Golan Heights (they are named in order of importance. This order will be used in the future for the cards distribution).
9. The decreasing value cards order is: AS, K, Q, J, 10, 9, 8, 7, 6, 5, 4, 3, 2 it is the equal for each suit.
10. The card value in itself is: AS=4 points; K=3points; Q=2 points; J=1point; for the others is null.
11. As we have 5 objects (or 'sub objects') and 13 cards for suit. We will agree that in each suit, every two consecutive cards will symbolize one object

²⁴ **'Equal'** in number (13 cards each suit), but not in score, it varies in each suit. Playing Bridge the score is important but, in our simulation, the suit score is not important at all because in our case the importance comes from the argument related with the object that the card symbolizes in each concrete suit.

according to the order of importance given over objects, cards and suits (e.g. AS and K of spades will symbolize the political arguments in pro to Jerusalem East; Q and J in hearts will symbolize the financial arguments in pro to Sinai Peninsula; 10 and 9 in diamonds will symbolize the social arguments in pro to West Bank; 8 and 7 in clubs will symbolize the cultural arguments in pro to Gaza; and 6 and 5 of each suit will symbolize the arguments in pro to the Golan Heights).

12. Consequently, we will always have three ‘surplus’ cards (the 4, 3 and 2 of each suit), these will be the ‘added value’ in pro the generic object aspect (e.g.: the 4, 3 and 2 of spade will symbolize the ‘added political value’ in pro the Object –all territories occupied during the ‘67 War–).

Once we have agreed these 12 points, we can distribute the cards:

- **Spades** distribution (political arguments in pro):

AS: Political argument in pro of **Jerusalem East**. Value in itself=**4 points**. For **Begin** (It is the Jewish Holy City).

K: Political argument in pro **Jerusalem East**. Value in itself=**3 points**. For **Sadat** (It is the Third Muslim Holy City and it is an old, previously to the ‘67 War, Muslim territory from Jordan).

Q: Political argument in pro the **Sinai Peninsula**. Value in itself=**2 points**. For **Begin** (It is a war conquest and it entails the control on the one Suez Canal’s bank).

J: Political argument in pro the **Sinai Peninsula**. Value in itself=**2 points**. For **Sadat** (It is the historic Egyptian Territory and it entails the Egyptian control on the two Suez Canal’s banks).

10: Political argument in pro the **West Bank**. Value in itself=**0 points**. For **Begin** (It is a war conquest).

9: Political argument in pro the **West Bank**. Value in itself=**0 points**. For **Sadat** (It is an old, previously to the '67 *War*, Muslim territory from Jordan).

8: Political argument in pro **Gaza**. Value in itself=**0 points**. For **Begin** (It is a war conquest).

7: Political argument in pro **Gaza**. Value in itself=**0 points**. For **Sadat** (It is an old, previously to the '67 *War*, Egyptian territory).

6: Political argument in pro the **Golan Heights**. Value in itself=**0 points**. For **Begin** (It is a war conquest).

5: Political argument in pro the **Golan Heights**. Value in itself=**0 points**. For **Sadat** (It is an old territory, previously to the '67 *War*, Muslim territory from Syria).

4, 3 and 2: The added political generic value over the occupied territories. Value in itself=**0 points**. **4:** for **Begin** (he is the present 'landowner'); **3:** for **Sadat** (the mediator, Carter offers it because he need a 'foot' into the *East World*); **2:** for **Begin** (Carter is the ally of Begin then, he cans not 'snatch' them to Begin. And we should remember that Israel has nuclear weapons –manufactured at the nuclear plant in Dimona–).

- **Hearts distribution** (financial arguments in pro):

AS: Financial argument in pro of **Jerusalem East**. Value in itself=**4 points**. For **Begin** (It is the Jewish and Christian Holy City. The religious tourism is a high potential financial source).

K: Financial argument in pro **Jerusalem East**. Value in itself=**3 points**. For **Sadat** (It is the third Muslim Holy City. The religious tourism is a high potential financial source, perhaps, not so directly to Egypt, but to the Muslim world, more concretely, to Jordan, the landowner of Jerusalem East before the '67 *War*).

Q: Financial argument in pro the **Sinai Peninsula**. Value in itself=**2 points**.
For **Begin** (It entails the control of one of the Suez Canal's banks).

J: Financial argument in pro the **Sinai Peninsula**. Value in itself=**2 points**.
For **Sadat** (It is an old Egyptian territory, previously to the '67 War. It entails the Egyptian control for the two Suez Canal's banks).

10: Financial argument in pro the **West Bank**. Value in itself=**0 points**. For **Begin** (It could potentially contribute to increase the Gross Domestic Product).

9: Financial argument in pro the **West Bank**. Value in itself=**0 points**. For **Begin** too (The territory could be developed economically but it wouldn't be a benefit for Egypt as it didn't belong to him).

8: Financial argument in pro **Gaza**. Value in itself=**0 points**. For **Begin** (It could potentially contribute to increase the Gross Domestic Product).

7: Financial argument in pro **Gaza**. Value in itself=**0 points**. For **Sadat** (It is an old Egyptian territory, previously to the '67 War. It could potentially contribute to increase the Gross Domestic Product).

6: Financial argument in pro the **Golan Heights**. Value in itself=**0 points**. For **Begin** (Israel needs the water from the Golan Heights).

5: Financial argument in pro the **Golan Heights**. Value in itself=**0 points**. Also for **Begin** (Egypt cannot have financial interest in a territory that didn't belong to him).

4, 3 and 2: The added financial generic value over the occupied territories. Value in itself=**0 points**. **4:** for **Begin** (he is already the 'landowner'); **3:** for **Sadat** (the mediator, Carter offer it because he needs the Egyptian oil); **2:** for **Begin** (Carter is the ally of Begin then, he cannot betrays Begin).

- **Diamonds distribution** (social arguments in pro):

AS: Social argument in pro of **Jerusalem East**. Value in itself=**4 points**. For **Begin** (It is the Jewish Holy City. It is the only one territory really occupied to the Jewish population).

K: Social argument in pro **Jerusalem East**. Value in itself=**3 points**. For **Begin** (It is similar to the previous, the Jewish population is the majority in Jerusalem East).

Q: Social argument in pro the **Sinai Peninsula**. Value in itself=**2 points**. For **Sadat** (The majority population is Egyptian. It is an old Egyptian territory previously to the '67 War).

J: Social argument in pro the **Sinai Peninsula**. Value in itself=**2 points**. For **Begin** (It gives the opportunity to increase population).

10: Social argument in pro the **West Bank**. Value in itself=**0 points**. For **Sadat** (The majority of the population is Palestine).

9: Social argument in pro the **West Bank**. Value in itself=**0 points**. For **Begin** (It gives the opportunity to increase population).

8: Social argument in pro **Gaza**. Value in itself=**0 points**. For **Sadat** (The majority population is Egyptian/Palestine. It is an old Egyptian territory previously to the '67 War).

7: Social argument in pro **Gaza**. Value in itself=**0 points**. For **Begin** (It gives the opportunity to increase population).

6: Social argument in pro the **Golan Heights**. Value in itself=**0 points**. For **Sadat** (The majority of the population is Palestine and/or Muslim).

5: Social argument in pro the **Golan Heights**. Value in itself=**0 points**. For **Begin** (It gives the opportunity to increase population).

4, 3 and 2: The added social generic value over the occupied territories. Value in itself=**0 points**. **4 and 3:** for **Sadat** (The majority of the population in the occupied territories is Egyptian, Palestine and/or Muslim, but not Jewish); **2:** for **Begin** (he is the present 'landowner').

- **Clubs distribution** (cultural arguments in pro):

AS: Cultural argument in pro of **Jerusalem East**. Value in itself=**4 points**. For **Begin** (It is the Jewish Holy City).

K: Cultural argument in pro **Jerusalem East**. Value in itself=**3 points**. For **Sadat** (It is the third Muslim Holy City).

Q: Cultural argument in pro the **Sinai Peninsula**. Value in itself=**2 points**. For **Sadat** (Is is the memorable territory of Egypt).

J: Cultural argument in pro the **Sinai Peninsula**. Value in itself=**2 points**. For **Sadat** (The Sinai is the facto a historical Egyptian territory).

10: Cultural argument in pro the **West Bank**. Value in itself=**0 points**. For **Sadat** (The majority population is Palestine).

9: Cultural argument in pro the **West Bank**. Value in itself=**0 points**. For **Begin** (It is located into the Holy Land's border).

8: Cultural argument in pro **Gaza**. Value in itself=**0 points**. For **Sadat** (The majority of the population is Egyptian/Palestine. It is an old Egyptian territory previously to the '67 War).

7: Cultural argument in pro **Gaza**. Value in itself=**0 points**. For **Begin** (It is located into the Holy Land's border).

6: Cultural argument in pro the **Golan Heights**. Value in itself=**0 points**. For **Sadat** (The majority of the population is Palestine or Muslim).

5: Cultural argument in pro the **Golan Heights**. Value in itself=**0 points**. For **Begin** (It is located into the Holy Land's border).

4, 3 and 2: The added cultural generic value over the occupied territories. Value in itself=**0 points**. **4 and 2:** to **Sadat** (The majority of the population on the occupied territories is Egyptian, Palestine and or Muslim, but not Jewish); **3:** to **Begin** (Four out of the five territories are into the Holy Land's border).

Now, we know the options. The result is as follows:

For Begin:

♠ As, Q, 10, 8, 6, 4, 2 = 7 cards/6 points in ♠

♥ As, Q, 10, 9, 8, 6, 5, 4, 2 = 9 cards/6 points in ♥

♦ As, K, J, 9, 7, 5, 2 = 7 cards/8 points in ♦

♣ As, 9, 7, 5, 3 = 5 cards/4 points in ♣

Total cards: C_{52}^{28} Total points: P_{40}^{24}

For Sadat:

♠ K, J, 9, 7, 5, 3 = 6 cards/4 points in ♠

♥ K, J, 7, 3 = 4 cards/4 points in ♥

♦ Q, 10, 8, 6, 4, 3 = 6 cards/2 points in ♦

♣ K, Q, J, 10, 8, 6, 4, 2 = 8 cards/6 points in ♣

Total cards: C_{52}^{24} Total points: P_{40}^{16}

Now it is the moment to kwon ‘*which will be the trumps?*’ But before, we would like to point out that though the number of cards is not equal in both, this is not a real problem, because the difference can be considered itself negligible, as we are considering a balance of ± 2 cards [per player] and the score in points represents $24/40=60\%$ for **Begin** and $16/40=40\%$ for **Sadat**. This difference is acceptable because we need to have at least one player with the 30% of the points, in our case there are two players (not four), with 60% of points.

So, it is evident that **Begin** will decide on the trumps (he has the majority, 60%, of the points at stake and in this case also the cards, 107.6%). To play a suit trumps is necessary to have at least the half + 1 of possible cards on this suit ($13/2=6.5\approx 7$ cards) and desirable the half +2 that means 8 cards. **Begin** would like to play at trumps in hearts, but **Sadat** would like to play at trumps in clubs. As **Begin** is stronger at all suits, even in clubs because he has the AS + 4 cards to support this AS, he will decide that the trumps will be not-trumps. **Sadat** will agree to play at not-trumps. In the Bridge terminology the agreement is expressed as: 1♥ **Begin**, 2♣ **Sadat**, 3NT **Begin**, Pass

Sadat. The game starts and the promise is: '*I, **Begin**, promise that playing at Not-Trumps, I will achieve at least 18 tricks (because they are 9 to 4 players) over the possible 24 (not 26, as it would be, 52/2, because Egypt only has 24 cards)*'.

We are ready to the crucial moment of our game.

Begin

♠ As, Q, 10, 8, 6, 4, 2	♥ As, Q, 10, 9, 8, 6, 5, 4, 2	♦ As, K, J, 9, 7, 5, 2	♣ As, 9, 7, 5, 3
♠ K, J, 9, 7, 5, 3	♥ K, J, 7, 3	♦ Q, 10, 8, 6, 4, 3	♣ K, Q, J, 10, 8, 6, 4, 2

Sadat

Sadat starts the game, at not-trumps is convenient to play the fourth of the long suit, or the highest of the sequence of long suit, in our case is the second. Then **Sadat** will play K♣, it is the only possibility to reinforce the Q♣ and J♣, because **Begin** will use the AS in other suits to reinforce his position and if **Sadat** plays before **Begin**, he will always lose. The only possibility for **Sadat** is to agree with everything, although he could remember his political and financial force. But, the only feasible options for **Sadat** are Q and J in clubs. In a real Bridge game, **Sadat** could win other tricks because there is a turn to play but being a conversation the turn is not really clear.

Therefore, '*what is the true profit for **Sadat**?*' The true profit for **Sadat** is the cultural matter over the Sinai Peninsula (Q and J in clubs). '*Where cans **Sadat** put the strength in this negotiation?*' **Sadat** only can put the strength on the importance of the return to the Sinai Peninsula. He will need to keep the negotiations around this matter all the time. That will be his key point.

*'What is the true profit for **Begin**?' The true profit for **Begin** is to reaffirm his power in the region.*

At this time, it is the moment to remember the principle shouldn't be forgotten, that is: not condition the game's result. '*What happened in Camp David?*' The

agreement was to return the Sinai Peninsula to Egypt. And the goal, the framework for peace in the Middle East was achieved, and the framework for the conclusion of a peace treaty between Egypt and Israel was achieved too.

So we can conclude with two remarks:

1. That our forecast on the *Camp David Accords* has been right. And we can assert, despite that many people thinks that the *Camp David Accords* were a failure, that the *Camp David Accords* were a resounding success. According to the previous [reflection], the best rational decision is the intersection point between '*f(optimization)*' and '*f(satisfaction)*'. This point will be, at the same time, the fruit of optimizing to maximum our true possibilities and not losing anything that could be lost before the negotiation starts. Herein the satisfaction: obtaining all obtainable and losing only the indispensable. To get more is a 'gift' [and to get less is] a 'loss' but not the fruit a rational decision because this would be the result of a mistake in any negotiation. Therefore, we can say that the Bridge bridges both spirals in the specific case of [...] negotiations, because it mixes the optimization (obtaining all obtainable) and the satisfaction (losing only the indispensable, what has been lost just [to start] the negotiation process) with the implementation. The Bridge is not only a theory; it is a theory that can be implemented in reality.

2. The Bridge game is a good application to analyse the real possibilities in an [...] negotiation because it bridges both spirals to these specific cases, and because it mixes the optimization (obtaining all obtainable) and the satisfaction (losing only the indispensable, [that one is already] lost before the negotiation) together with the real implementation. The Bridge is not only a theory, it is a theory that turns the conversion of countless variables (the arguments) in countable variables (the cards and their values), so we can play and we can also make the other way round and seeing what had happened. Therefore the Bridge could be a tool for the rational analysis of [...] negotiations.

[We have reached the moment to go through the lights and shadows of the Bridge application to negotiations.]

Chapter 1.3: The Bridge. A bridge toward negotiations. Lights and Shadows [This chapter is taken from MARTÍNEZ, M.D., 2011: 82-84. You will find in square brackets the additions and/or alterations to the original text.]

As we announced at the [introductory pages of this ‘Act’], [this chapter is an attempt] to answer to the following questions: ‘*To what extent is it possible to consider Bridge as an element for a rational analysis of the [...] negotiations?*’ ‘*What light does it provide to our understanding of the [...] negotiations?*’ ‘*Which are its limitations?*’ ‘*How could we overcome these limitations?*’

About the first question: ‘*to what extent is it possible to consider Bridge as an element for a rational analysis of the [...] negotiations?*’ the answer has already been suggested at the conclusion of the previous chapter. [Firstly,] we would like to clarify the fact that the Bridge is not only a theory but a theory that turns the conversion of countless variables (the arguments) in countable variables (the cards and their values), because of this we can play, but we can also take the other way round and see what had happened. The Bridge connecting the two spirals has become an abducing tool, that is, the Bridge makes possible to propose the following syllogism: we have a great premise and it’s evident, and we have other lesser, which is only evident or only probable, [then Bridge allow us for linking both together]. We have the ‘theoretical spiral’, which starts from a theoretical deductive process, and it is evident; and we have the implementation, the international negotiation in itself, which is starts from an empirical inductive process because not all negotiation details are evident or probable. Finally we need something to bridge, to link, both and that can let us to arrive to a true conclusion. As the Bridge makes possible to turn the negotiation of countless variables (that is, the empirical values) into countable variables (the theoretical values); and we can also do the other way round, then we can find the hidden link between both. We are now ready to arrive to a true conclusion. The Bridge bridges both studies: “(...) *prescriptive studies, concerned with procedures for achieving good outcomes, and the descriptive studies,*

focused on understanding how people negotiate.”²⁵ The creation of the game is founded on the understanding of how people negotiate, and to play it is the research for the best possible outcome. Even if the Bridge belongs to the *Game Theory*, it offers the possibility of not being only a laboratory analysis. In this way, the Bridge application is a step forward in the *Adjusted Winner Procedure*²⁶ (Brams & Taylor 1996) [because] in the Bridge we ascribe a value over the different aspects of the issue, and that’s the same starting point that the *Adjusted Winner Procedure*, but the Bridge puts these values at risk between themselves and, simultaneously, between the [game] players [...]. The value shifts from virtual to real [and] it is a constant *feed-back*.

In order to answer the question ‘*what light does it provide to our understanding of the [...] negotiations?*’, we think that the Bridge gives us the opportunity to affirm more strongly if a concrete [...] negotiation was, or will be, a success or a failure. As ‘linkage’ element it permits us, simultaneously, an overview and an internal detailed vision. We would need to remember now the fact that the winner is the pair that in more turns has reached the 100% of the possible tricks. Therefore, the Bridge application talks us about the degree of true success or true failure. Often we conclude: ‘*the negotiation was or will be a success*’ or ‘*the negotiation was or will be a failure*’ but quite often we mistake our wishes and/or fears with our real possibilities and we assess incorrectly events. The right assess over events is the only sure way towards the future, and it is learning to the future. It is the possibility to accept to negotiate or not in function of our cards and real possible tricks with them.

²⁵ Michel Rudnianski & Hélène Bestougeff, “*Bridging Games and Diplomacy*”. In: *Diplomacy Games. Formal Models and International Negotiations*, by Rudolf Avenhaus & I. William Zartman (eds.). Berlin, Springer-Verlag Publishers, 2007, p. 150.

²⁶ Cf. Quoted by Rudolf Schüssler, “*Adjusted Winner*” (*AW*) *Analyses of the 1978 Camp David Accords—Valuable Tools for Negotiators?*”. In: *Diplomacy Games. Formal Models and International Negotiations*, by Rudolf Avenhaus & I. William Zartman (eds.). Berlin, Springer-Verlag Publishers, 2007, p. 283-296.

Finally, ‘*which are the limits of the Bridge?*’ and ‘*how could we [overcome] these limitations?*’

The Bridge has a big limitation when [there is one or a combination of these reasons:]

- The issue for negotiating does not agree with the aim of the negotiation. Application of the Bridge requires that object/s and goal/s share the same internal structure so that their different aspects may be represented by the same suits.
- The power is very close to the opponents. In this case probably the best solution would be the *Adjusted Winner Procedure*, because it calculates issues and not relationships between them and the players.
- The control over the time and the space. All change, even if it is very small, will change the game. You can do a very good preparation and an unexpected event at the last minute could change all, even if we have done the calculus of gains and losses in connection with the different combinatorial possibilities ([...] we should make it before getting into the negotiations themselves because it’s the only possibility to know how often the favorable scenario for negotiating take place). This is much more common that we could think, because the negotiations are implemented for individuals, and individuals are always unpredictable at 100%. This could be ‘solved’ with a real good preparation [knowing always remains some incertitude, subjectivity is always on place, it is intrinsic to the players –subjects in themselves-]. Briefly, the Bridge applied [to] [...] negotiations is an analysis about ‘*when saying what?*’ and about ‘*if the arguments we have can be tackle in the negotiation*’. In case of doubt we could always remember Wittgenstein saying: “*whereof one cannot speak, thereof one must be silent*”²⁷

²⁷ Ludwig Wittgenstein, *Tractatus Logico-Philosophicus*, § 7. Source online: http://home.uchicago.edu/~luke_manning/tractatus/tractatus-jsnav.html

[...]

[Despite all, the GREAT limitation of the Bridge application to negotiations is and will be the ‘true’ subjectivity. It could be named ‘first subjectivity’ because it is present from the beginning of the process and will be liable for two inherent shadows to us and another one, indirect, implied in our interlocutor.]

[Direct shadows:]

- [1. To decide what arguments to choose to be employed during the negotiation.]
- [2. To assign each argument the right card to symbolise it.]

[Indirect shadow:]

- [1. Even trying to be as good as possible during the negotiation process we cannot guarantee what will be replied to our arguments, we cannot predict it.]

[The next pages are meant to throw some light on each of the above shadows. Shadows will definitely persist (negotiator -subject with subjectivity- is always one of the necessary elements in a negotiation), but they can be lighter.]

ACT II: NEURO-LINGUISTIC PATTERNS (NLP)

Going the next step ahead, as mentioned in the introductory pages each ‘Act’ aims to be a part of a ‘tragedy’: a ‘conceptual mimesis’ of the used arguments, meant to produce a ‘catharsis’, an improvement on the negotiation process. Thus, this ‘Act’ will be our second step where our task will address to the limits, with the purpose to reduce them, to throw some light in the shadows.

At this step the tool chosen to try to reduce the limitations has been Neuro-Linguistic Patterns (hereunder, NLP); it will be applied to the previously showed shadows. NLP has been selected because all the flaws in a negotiation process are a product of the negotiator’s weakness shown through his arguments. If we want to study flaws in arguments, we are in the NLP territory.

On the next pages we will try to give an answer about to what could NLP do to illuminate the limitations. Firstly, we will introduce NLP in order to decide whether NLP may be considered a useful tool to make rational decisions in the world of negotiations –Chapter 2.1-. Right before we deal with limitations in the light of NLP we will take a look at how are these Patterns working in our mind –Chapter 2.2-. To finish, we will look at the shadows under the light of NLP –Chapter 2.3-.

Chapter 2.1: Are NLP a useful tool to make rational decisions in the world of negotiations?

In order to give an answer to this question, we should start by defining what are NLP.

Neuro-Linguistic Programming is the study of [Neuro-Linguistic Patterns], [of] how we think and communicate, with ourselves and with others, and how we can use this to get the results we want. (Centre of Excellence 2014a: 11)

Therefore, reading this definition we can trust NLP will be the right tool to reduce the limitations. However, when we go deeper in we discover that NLP more about Programming than about Patterns. It is more focused on the techniques to put into practice and the results than on the structure of arguments themselves. Moreover, since the beginning of NLP there has been a huge amount of literature on NLP applied to business ('business' means 'negotiation' *per se*). This is not the interest of this study. This piece of research is not about how to say (Programming) an argument -in a semiotic meaning-; we are analyzing how to build it, its structure -syntax- and the semantic implication of the syntax chosen (syntactic Pattern form) in addition to how is it taking place -intonation- (pragmatic Pattern form) and what is behind of the manifested form, what is 'hidden', as modelling, a precise syntax and its intonation for each argument.

Now, we can agree that NLP ('P' understood as Patterns) are a useful tool to make decisions in the world of negotiations. Could NLP also be useful to make also 'rational' decisions? Yes, definitely, because we are keeping the 'P' in NLP as Patterns, that is, as syntax + 'semantics of syntax in itself'²⁸, as 'grammar' in Montague's

²⁸ We are understanding 'semantics of syntax in itself' as the representational value that the syntactic form takes in our mind (i.e.: when we hear a conjunctive sentence, our mind considers it as real, meaning true, every part of the conjunctive sentence).

meaning²⁹. Moreover, we know that the rational value of true is in syntax, in accordance with:

- If an assertion is true, its denial will be false (taking the same sense as in classic logic).
- For a true conjunctive sentence, each part of it has to be true (taking the same sense as in classic logic).
- For a true disjunctive sentence, at least one of its parts must be true (taking the same sense as in classic logic).
- For a true conditional sentence, we consider **only** the case our mind takes as natural: if the antecedent is true then the consequent will be true.
- Any true universal sentence or necessary sentence has to be true for every case (taking the same sense as in classic logic).
- Any true particular (existential) sentence or possible sentence, it has to be true at least for one case (taking the same sense as in classic logic).

If we are to be true as negotiators, then our sentences will be true sentences. So, their syntax will be in accordance with what has been said just above. So we can conclude that NLP are a useful tool to make rational decisions in the world of negotiations.

Now we are almost ready to deal with throwing some light to the limitations suggested at the end of the previous 'Act'. Right before engaging in limitations, we will take a look at how these Patterns work in our mind.

²⁹ Cf. MONTAGUE, R. (1970).

Chapter 2.2: How do Linguistic Patterns work in our mind?³⁰

Linguistic Patterns, syntactical expressions of thoughts, work in two directions:

- *Versus* us direction: when somebody is talking to us we are doing linguistic assumptions. These assumptions are creating a ‘new’ syntax structure (the same or different that the original), meaning a ‘new’ true value (it could also be the same or different that the original value in the mind of the speaker). And that one, the ‘new’ one, will be over that we go to reply. As we cannot to have a control of the original meaning in the mind of our interlocutor, we cannot to be sure if our answer is really in accordance with what he has said. Nevertheless, we can learn that a great lesson from it: the same happens the other way round.

- *Versus* our interlocutor direction. We cannot control the structure of his speech but we can have a good command over our language expression. To reach this command we need to assess presuppositions, or rather, linguistic assumptions; they are basically:

Syntactic Patterns

- Using nouns presupposes the existence of the entity to which they are applied. [Assertive sentence]

- Using copulative sentences presupposes that each one of them is the case. [Conjunctive sentence]

- Using ‘or’ presupposes exclusion/inclusion. [Disjunctive sentence]

- Using the conditional structure, like if ... then ... or similar, presupposes a cause and its effect. In fact, every cause-effect can be represented as a conditional relation (this is how our mind understands viscerally the conditional pattern, even when not every conditional sentence is a proper representation of the cause-effect relation, however, in our mind a conditional sentence produces always a cause-effect pattern). [Conditional sentence]

³⁰ Cf. Centre of Excellence, 2014a: 55-71.

- Using quantifiers or modal operators presupposes necessity or possibility. [Universal/Necessary or Particular/Possible sentence]

- **WARNING!** When negative sentences are true, their affirmative mood will be false and *vice versa*. This is tricky, because our mind acts quite oddly in such a case, as in fact “*the mind cannot process a negative instruction, for example if I say don’t think of the colour red, what comes to mind?*” (PETRUZZI, J., 2012: 77) and *vice versa*: “*Suggestions which logically are negatives but create an internal representation which the unconscious acts on as a positive suggestion.*” (Centre of Excellence 2014a: 69).

Intonation Patterns (pragmatic Pattern form)

- Question/Statement/Command. An argument is not just a sentence, an argument is also a pronounced sentence; then, intonation is as important as the argument itself.

Special Pattern

- Silence: “*silence can be interpreted as having meaning. (...) Our mind and body are part of the same system, so the thoughts we have affect our physiology, and are shows up in our non-verbal interactions.*” (Centre of Excellence 2014a: 20). Still more, silence is the replacement of at least a word, or even for the expression of a whole thought. Never naïve, silence is never an empty set or an infinite set, silence is always the expression at least one of the elements of a limited set of possible elements to take up that place.

So far we have been speaking about the ‘visible’ structure of Patterns. Patterns, for us realize, need to take place in a concrete expression (word/sentence + intonation + body expression or silence + body expression); this is why we cannot overlook what is behind every concrete expression. In the farthest depths of every one of us are our beliefs and values (‘hidden’ Patterns structure), they are modeling our expressions and not only its contents, also its form –syntax + intonation-. Being aware of how beliefs

and values are modeling expression forms is not easy (direct/indirect syntactical patterns/intonations/body language. For ex.: usually oriental cultures would choose the indirect form), but it is the essential key to achieve rapport or not, so we should not disdain them when evaluating the patterns that we are going to use. When we are communicating to somebody, we can know and/or share the beliefs and values with him, or not, but if we really want to communicate we have to shape our expressions in a ‘common’ territory to guarantee comprehension, to be sure our patterns are recognized.

Knowing all of that we can make as many combinations, variations and/or permutations as we want. So, we can say, being right, that if we are aware of this, we can manage our arguments as best as possible in the desired way; even if we *“don’t get dealt the best cards in life, though we have a choice in how we respond. And it is within our response that our lives are shaped.”* (PETRUZZI, J., 2012: 29). The desired way cannot be a manipulative style because *“manipulative behaviour never works. Usually the other person will spot what the manipulator is trying to do because they seem ‘false’ or not fully human in their responses. (...) If you respect the other person and dovetail your desired outcome with theirs, you will get a win-win situation and everyone is satisfied. If not, neither party will achieve their outcome.”* (Centre of Excellence 2014a: 29).

Now it is time to deal with the possibility to throw some light on the suggested limitations at the end of the previous ‘Act’.

Chapter 2.3: Shadows under the light of NLP

Going back to the end of the previous ‘Act’, in Chapter 1.3, we can revive here ‘true’ limitations for the Bridge application to negotiations and look at them under the NLP: can they throw any light into the shadows? We will go through the limitations one by one.

We will start looking to the ones we named ‘direct shadows’, the ones inherent to our own subjectivity.

1. To decide what arguments to choose to be employed during the negotiation.

As we have already seen, we cannot be sure about what arguments, in the meaning of their contents, should be chosen. But we are responsible of choosing the best syntax and intonation pattern and/or the best silence and body language pattern, for each of the arguments. To do our best, we should always keep in mind where is the common territory of beliefs and values (our own and the interlocutor’s) and we should make arguments be born there.

At the moment, there is no doubt about one thing we have to take into account when we choose arguments to employ in a negotiation process: we must take a very special care using arguments under a negative assertion form; they will always suggest the opposite (a positive suggestion) in the mind of our interlocutor.

2. To assign each argument the right card to symbolise it.

We will never have one hundred per cent certainty to have chosen the right card, the one that best symbolize the each argument. However, it is for sure that the better our knowledge of the common territory of beliefs and values territory, the better the connection, and therefore also the accuracy, between argument and its symbol in a playing card.

Regarding the ‘indirect shadow’, that one implied in the subjectivity of our interlocutor, we cannot guarantee what will be replied to our arguments, we cannot predict it. About that no light is coming in from NLP. We could only suspect that replied arguments will probably come from the interlocutor’s beliefs and values, but we cannot be sure about this.

Next ‘Act’ will be an attempt to pursue the first ‘direct shadow’ and the ‘indirect shadow’. For both, we will be going deeper in syntax, because syntax is the only rational pattern for an argument, therefore syntax is the only discipline where we should do our best and where we can predict the outcome (knowing that the limit to a right prediction is always the form of expression of beliefs and values).

ACT III: CRYPTIC LANGUAGE: RUSSIAN CARDS

As promised at the end of the previous ‘Act’, in this one we will tackle deeper the syntactic patterns as a tool to decide what arguments should be chosen to employ during the negotiation, as well as to predict replies, both still in the darkness.

Along the next pages we will try to give an answer to how to create right syntactic patterns which can cause good and predictable replies. Hence, we will analyse a cryptic language: Russian Cards (van DITMARSCH, 2008) –Chapter 3.1-. We will extract two key lessons from it –Chapter 3.2-. Thus, dialogical framework pattern will throw some light in the darkness –Chapter 3.3-.

Chapter 3.1: Hunting Hackers. Is it useful to think like a ‘mute guest’ to prepare a negotiation talk thoroughly?

This chapter deals with a cryptic language: Russian Cards. The original problem was proposed at the Moscow Mathematics Olympiad in 2000³¹:

From a deck of seven distinct cards, Alice and Bob are each dealt three cards and Cathy is dealt the remaining card. None of the players knows any of the cards of the other players. Describe how, using a series of truthful public announcements, Alice and Bob can exchange information about the hands they hold without Cathy being able to deduce the owner of any card other than her own. (KELLERMAN, R., 2014: 1)

Thus we are inside a typical framework for a Dynamic Epistemic Logic (hereunder, DEL). The progress of knowledge depends on the public announcements³² made by the knowledge subjects involved -for our case: Alice, Bob and Cathy-. We can say Alice and Bob are ‘active’ knowledge subjects and Cathy is just a ‘passive’ subject, like a ‘mute guest’.

‘Is the ‘mute guest’ a true ‘passive’ subject or could be she a ‘disguised hacker’?’ The aim of this chapter is to answer this question. We will analyse the Russian Cards from the dialogical semantics because our interest is to find out what is happening in Cathy’s mind, what is Cathy thinking when she is listening announcements from Alice and Bob (as you can see, we are not using at the moment the word ‘knowledge’ for Cathy because the problem says: “*Alice and Bob can exchange information about the hands they hold without Cathy being able to deduce the owner of any card other than her own*”) So, our interest is in the field of semantics, what is the

³¹ Cf. KELLERMAN, R. (2014)

³² Cf. van DITMARSCH, H., van der HOEK, W. & KOOI, B., 2008: 104-107.

meaning of what is being said. Only at the end of this reasoning, we will get to know what has changed in Cathy's knowledge.

For this analysis we will take the Russian Cards problem developed by van Ditmarsch (2008, pp. 97-104 *et* 108). First, we will tackle its dialogical semantics form for the general case. Then we will be ready to think what is happening in Cathy's mind in each case shown. Note that in the van Ditmarsch's Russian Cards the names of the characters have been changed: Alice is Ann (a), Bob is Bill (b) and Cathy becomes Cath (c).

A dialogical semantics³³ for the Russian cards

1. Mathematical rules for the Russian cards:

1.1. Characteristics of the game:

- We have three players: a; b; c.
- We have a stack with seven different cards. They are numbered: 0; 1; 2; 3; 4; 5; 6.

$$C = \{0, 1, 2, 3, 4, 5, 6\}$$

- The card deal for player a and for player b are the same: 3 cards each; player c gets only 1 card.
- The language assumes expressions in the form $gR(m, n, p)$, that should be interpreted as player g has the cards m; n; p. More precisely:

$$aR(m, n, p); bR(m', n', p'); cR(m'')$$

where m; n; p; m'; n'; p'; m'' are (different) numbers from 0 to 6.

In order to simplify the notation, we will follow the convention used by van Ditmarsch, van der Hoek & Kooi, from whom expressions of the form $aR(m, n, p)$ are taken: mp_a and so on.

³³ Cf. for rules of dialogical semantics –points: 2, 3, 4 and 5 of this section– S. RAHMAN & N. CLERBOUT (2015) and J. REDMOND & M. FONTAINE (2011).

1.2. Objective of the game:

- The game has only one objective and it consists in two parts:

Part 1: players a and b interchange information about the cards they hold.

Part 2: after this sharing, player c must be still ignorant, or in others words, he still knows only his own card and does not know who has what.

Hence the objective of the game can be rendered with the following expression $[K_a(mnp_a) \wedge K_a(m'n'p'_b)] \wedge [K_b(m'n'p'_b) \wedge K_b(mnp_a)] \wedge [K_c(m''_c) \wedge \sim K_c(mnp_a) \wedge \sim K_c(m'n'p'_b)]$ that reads.

1.3. Knowledge stage or terms of the game:

- The 3 players (a; b; c) know that 7 cards have been dealt. They are not duplicated and they are numbered 0 to 6: $C = \{0, 1, \dots, 6\}$
- The deal has been: $C_{(a)}^3 * C_{(b)}^3 * C_{(c)}^1 = aR(\binom{3}{7}); bR(\binom{3}{4}); cR(\binom{1}{1}) = 140$ deals are possible.
- Player a and player b have to let each other know the cards they hold without discovering it to player c. Player c has to remain ignorant about who has what after their announcements (in accordance with the objective of the game –previous section: 1.2.- and inside the framework of the logic of the public announcements –next section: 1.4.-).
- At first, every player knows only his own cards.
- After the deal the cards distribution has been: $012_a; 345_b; 6_c$.

2. Particle rules:

Announcement structure	Attack	Defence
$!\alpha\wedge\beta$ The attacker chooses the defence	$?L_{\wedge}$	$!\alpha$
	$?R_{\wedge}$	$!\beta$
$!\alpha\vee\beta$ The defender chooses the defence	$?V$	$!\alpha$
		$!\beta$
$!\alpha\rightarrow\beta$	$!\alpha$ (α is assumed to occur)	$!\beta$
$!-\alpha$	$!\alpha$	-----
$!\forall_x A_x$	$?k$ (k is chosen by the attacker)	$!A_k$
$!\exists_x A_x$	$?E$ (could you show me one, please?)	$!A_k$ (k is chosen by the defender)
$!\Box^{34} A_{C_i}$	$?C_j <C_i R C_j>$ (C_j is chosen by the attacker)	$!A_{C_j}$
$!\Diamond^{35} A_{C_i}$	$?D$ (could you show me a case, please?)	$!A_{C_j} <C_i R C_j>$ (C_j is chosen by the defender)

3. Structural rules for a game played inside the intuitionistic logic:

- Player c always remains as ‘mute guest’.
- The game starts with an assertion from player a .
- By rotating turns, player a first, then b , and again a and b , make a public announcement, either as an assertion or as a question.
- Each announcement -assertion or question- must be true.
- Each announcement produces a new ‘engagement’ that adds to the previous ones, making an ‘engagement’ chain. No player can avoid him ‘engagement chain’.

³⁴ It will be the same in all the cases where there is a modal operator: alethic, deontic, epistemic, doxastic, temporal or a combination of them.

³⁵ *Idem.*

- No player can repeat an argument already attacked. If an argument is repeated it will be because the player arrives to the same argument through a different way (i.e.: from another hypothesis).
- Each announcement has to have a reply. It is not possible to leave an announcement without reply. At the end of the game each attack must be completed with its defence unless:
 - The attack has been against a negation sentence. Then no reply, no defence is possible (it has already been mentioned how our mind reacts to negative sentences –cf. Chapter 2.2, p. 44-).
i.e: Cf. S. RAHMAN & N. CLERBOUT, 2015: 68.

	O			P	
				$!A \vee \neg A$	0
1	$? [A \vee \neg A]$	0		$! \neg A$	2
3	$!A$	2		--	

O Wins

- The attack has been a double negative sentence. Negative sentences can only be attacked one at time because, as just seen two points before, no player can avoid his ‘engagement chain’, so no player can say $!A$ when he has already said $! \neg A$. Therefore, faced with attacks against double negative sentences a double attack will not be possible (being A an elementary proposition).
i.e.: Cf. S. RAHMAN & N. CLERBOUT, 2015: 69.

	O			P	
				$! \neg\neg A \rightarrow A$	0
1	$! \neg\neg A$	0			
	--			$! \neg A$	2
3	$! A$	2		--	

O Wins

- The attack has been an elementary proposition and the respondent does not have the possibility to reply the same elementary proposition. i.e: Cf. S. RAHMAN & N. CLERBOUT, 2015: 66.

	O			P	
				$! Qa \rightarrow Qb$	0
1	$! Qa$	0			3

O Wins

- “Attack is the best form of defence”. If we can choose between attacking or defending, in most instances we should attack first.
- The game ends when a knows b’s deal and *vice versa*, and c remains ignorant.

4. Formalisation for the general case:

Case 3.1.

OPPONENT (b)		PROPOSER (a)		
	HYPOTHESIS	THESIS		
H1	$g \neq g' \neq c; g, g' \in \{a, b\}$	$!(012_a \vee 012_b) \rightarrow [(012_a \vee 012_b) \wedge (345_a \vee \vee 345_b)]$		0
H2	$C = \{0, 1, 2, 3, 4, 5, 6\}$			
H3	$mnp_g \rightarrow (\sim mnp_{g'} \vee \sim m'n'm''_{g'} \vee \vee \sim n'p'm''_{g'} \vee \sim m'p'm''_{g'} \vee m'n'p'_{g'})$			
H4	$\{m \neq n \neq p \neq m' \neq n' \neq p' \neq m''\} \in C$			
H5	$m'' \in \{c\} \text{ then } m''_c$			
1	$!(012_a \vee 012_b)$	0	$![(012_a \vee 012_b) \wedge (345_a \vee 345_b)]$	4
3	!012_a		1 ? \vee	2
5	?L \wedge	4	$!(012_a \vee 012_b)$	6
7	? \vee	6	!012_a	8
9	?R \wedge	4	$!(345_a \vee 345_b)$	10
11	? \vee	10	!345_b	20
13	$!012_g \rightarrow (\sim 012_{g'} \vee \sim 346_{g'} \vee \sim 456_{g'} \vee \vee \sim 356_{g'} \vee 345_{g'})$		⁽³⁾ H3 $!m/0; n/1; p/2; m'/3; n'/4; p'/5; m''/6$	12
15	$!012_a \rightarrow (\sim 012_b \vee \sim 346_b \vee \sim 456_b \vee \vee \sim 356_b \vee 345_b)$		^(H1) 13 $!g/a; g'/b$	14
17	$!\sim 012_b \vee \sim 346_b \vee \sim 456_b \vee \sim 356_b \vee \vee 345_b$		15 $!012_a$	16
19	!345_b		^(H5) 17 $? \wedge$	18

Summary for case 3.1: a holds 123 and b holds 456.

OR:

Case 3.2.

OPPONENT (b)		PROPOSER (a)		
	HYPOTHESIS	THESIS		
H1	$g \neq g' \neq c; g, g' \in \{a, b\}$	$\neg(012_a \vee 012_b) \rightarrow [(012_a \vee 012_b) \wedge (345_a \vee \vee 345_b)]$		0
H2	$C = \{0, 1, 2, 3, 4, 5, 6\}$			
H3	$mnp_g \rightarrow (\sim mnp_g \vee \sim m'n'm''_g \vee \vee \sim n'p'm''_g \vee \sim m'p'm''_g \vee m'n'p'_g)$			
H4	$\{m \neq n \neq p \neq m' \neq n' \neq p' \neq m''\} \in C$			
H5	$m'' \in \{c\}$ then m''_c			
1	$\neg(012_a \vee 012_b)$	0	$[(012_a \vee 012_b) \wedge (345_a \vee 345_b)]$	4
3	!012_b		1 ? \vee	2
5	?L \wedge	4	$\neg(012_a \vee 012_b)$	6
7	? \vee	6	!012_b	8
9	?R \wedge	4	$\neg(345_a \vee 345_b)$	10
11	? \vee	10	!345_a	20
13	$\neg 012_{g'} \rightarrow (\sim 012_g \vee \sim 346_g \vee \sim 456_g \vee \vee \sim 356_g \vee 345_g)$		⁽³⁾ H3 $!m/0; n/1; p/2; m'/3; n'/4; p'/5; m''/6$	12
15	$\neg 012_b \rightarrow (\sim 012_a \vee \sim 346_a \vee \sim 456_a \vee \vee \sim 356_a \vee 345_a)$		^(H1) 13 $!g/a; g'/b$	14
17	$\neg \sim 012_a \vee \sim 346_a \vee \sim 456_a \vee \sim 356_a \vee \vee 345_a$		15 $\neg 012_b$	16
19	!345_a		^(H5) 17 ? \wedge	18

Summary for case 3.2: a holds 456 and b holds 123.

5. Interpretation keys:

- External columns contain the intervention order number, that is, the game number moves.
- In the internal double column the number of move that is being attacked is placed. If the number is placed on the left means that the opponent is attacking a move from the proposer [ex.: move 1 (opponent) is attacking move 0

(proposer)]. If the number is placed on the right, then the proposer is attacking a move from the opponent [ex.: move 2 (proposer) is attacking move 1 (opponent)]. If there are others numbers in brackets above the attacked move number, this means: ‘as you said at move x or as you said at hypothesis x, I can attack you as I am doing now’ [ex.: move 14 (proposer) is attacking move 13 (opponent), his attack is based on Hypothesis 1 (H1)].

- The centre columns contain announcements: centre left are the opponent’s announcements and centre right are the proposer’s.

- Each announcement is preceded by a sign:

!: This means that the announcement is an assertion.

Assertions could be the pragmatic form of an attack and also of a defence.

?: This means that the announcement is not a ‘proper’ one, it is a question about a previous announcement.

Question could be the pragmatic form of an attack and also of a defence.

- Each row comprises 6 boxes (from left to right):

1. Box for the number of the opponent’s move.

2. Box for the opponent’s announcement (attack or defence under the form of an assertion or a question).

3. Box for the number of move attacked by the opponent to the proposer –if this is the case-.

4. Box for the number of move attacked by the proposer to the opponent –if this is the case-.

5. Box for the proposer’s announcement (attack or defence under the form of an assertion or a question).

6. Box for the number of proposer’s move.

- Box 2 and box 5 must be coordinated: if box 2 is an attack then box 5 must be its defence (and does not necessarily have to be the next move). Thus, we will hold an attack and its defence on the same row and it is not relevant if the defence is the next move or if it happens many moves after the attack (ex.: move 11 is an

attack by the opponent to move 10 of the proposer. This attack is defended –replayed- on proposer’s move 20).

Once we have dealt with the semantics for the general case, we should tackle the cases proposed by van Distmarch (2008) one by one, following the convention used by van Ditmarsch (i.e.: Exercise 4.72, etc.). This will help us answer the question we proposed: is the ‘mute guest’ a true ‘passive’ subject or could be he a ‘disguised hacker’? To accomplish this we are not going to formalise each case in a dialogical semantics form. We consider that we do not need ‘to repeat’ it for each case, once we know how dialogical semantics work, because our interest is in the ‘hidden column’, the one for the ‘mute guest’, Cath (c). So, we will hear the announcements as c would listen to them and we will imagine what kind of reflections would be happening in her mind.

Exercise 4.72 (A five hand solution): Assume deal of cards 012.345.6. Show that the following is a solution: Anne announces: “I have one of {012, 034, 056, 135, 246}” and Bill announces “Cath has card 6”. (van DISTMARCH, 2008: 103)

Bill (b) (opponent)		Ann (a) (proposer)		Cath (c) (‘mute guest’)
2	!6 _c	!012 _a ∨034 _a ∨056 _a ∨135 _a ∨246 _a	1	???

What is c thinking after a’s and b’s announcements?

1. How did b know I have card 6?
2. If b said 6 and no other out of the four possible cards, those ones that b does not must be because:
 - 2.1. In triads announced by a where card 6 is, there must be also at least one of b’s cards.

2.2. As each triad must guarantee the safety of the announcement, then no one can be inside the ‘true zone’ of another player (you can only have total control of your ‘true zone’). To be sure, the only one solution passes to include in each one of the triads, at least one proper card number of the announcer.

2.3. In the triads where 6 is, there is also a card from b (as seen just above: 2.1.). Thanks to this b knows these triads as not a’s triads. The triads contain also one of a’s cards to guarantee the safety of the announcement (as seen at 2.2.).

2.4. Therefore, if b announces, “Cath has card 6”, a does not have a triad where the 6 is.

3. So c removes these triads from a’s announcement, and the result is a ‘new’ a’s announcement: $!012_a \vee 034_a \vee 135_a$

4. c asks herself what is a’s hand. To answer, she will be doing the following reasoning:

4.1. In the triads where 6 is (056; 246), there is also one card of a and another of b, so:

$a = 0; 2$	then	$b = 5; 4$
$a = 5; 4$	then	$b = 0; 2$
$a = 0; 4$	then	$b = 2; 5$
$a = 2; 5$	then	$b = 0; 4$

4.2. Next step in c’s reasoning is comparing these binomials to the three remaining triads (as seen in 3.): $012_a \vee 034_a \vee 135_a$. The result is that either a holds **012** or **034**, therefore a holds 0 and b must hold either 25 or 54, so b holds 5.

Now c knows two of a’s triads for sure: $012_a \vee 034_a$ and one (135_a) like a ‘doubt’, we may say, because no light it is coming on that one after comparing it to the triads including 6.

4.3. Now, c compares the possible a's binomial to the triads containing card 6 (056; 246), looking to find more information, but nothing new is coming up.

012 to 056: as b said c holds 6, and c knows already b holds 5 and a holds 0.

034 to 056: This is the same case as above.

012 to 246: as b said c holds 6, and c knows a holds 0, and 0 should be together with 2 or with 4. For this case c would think a holds 2 and b holds 4.

034 to 246: This is the inverse of the case before, here c would think a holds 4 and b holds 2. In this case c would be in a GREAT mistake. So from here we can conclude that this part of the reasoning (4.3.) is not reliable. Therefore the reasoning of c should always conclude at the previous step (4.2.).

c's most likely final state of knowledge:

$012_a \vee 034_a$

$a = 0; 2$ then $b = 5; 4$. Therefore 012_a and 543_b

or

$a = 0; 4$ then $b = 2; 5$. Therefore 034_a and 251_b

As the deal has been: $C_{(a)}^3 * C_{(b)}^3 * C_{(c)}^1 = aR(\binom{3}{7}); bR(\binom{3}{4}); cR(\binom{1}{1}) = 140$ deals are possible. At the beginning, c knows she holds 6, so the possible deals are only the ones where c holds 6, therefore there are 20 possible deals: $C_{(a)}^3 * C_{(b)}^3 = aR(\binom{3}{6}); bR(\binom{3}{3}) = 20$. In fact, Cath is only hesitating between two possible deals $[(012_a \wedge 543_b) \vee (034_a \wedge 251_b)]$, thus c knows the 18 deals that are not possible. If 20 unknown deals mean 100% of c's ignorance, then 2 unknown will be 10% of c's ignorance. In this case, Cath has reached a knowledge of 90% according to the deals and 33.3333% knowledge about the composition of each deal (c knows one card from a (0) and one from b (5)).

Total c's knowledge is 93.3333%

Total c's ignorance is 6.6667%

c's final state of knowledge including the 'doubt' (135_a):

012_a∨034_a∨135_a

Total c's knowledge is 85%

Total c's ignorance is 15%

In this case c cannot reach more knowledge because no card is common for all three of a's possible deals.

Exercise 4.73 (A six hand solution): Assume deal of cards 012.345.6. Show that the following is a solution: Anne announces: "I have one of {012, 034, 056, 135, 146, 236}" and Bill announces "Cath has card 6". (van DISTMARCH, 2008: 103)

Bill (b) (opponent)		Ann (a) (proposer)		Cath (c) ('mute guest')	
2	!6 _c	!012 _a ∨034 _a ∨056 _a ∨135 _a ∨146 _a ∨236 _a	1		???

What is c thinking after a's and b's announcements?

1. How did b know I have card 6?
2. If b said 6 and no other out of the four possible cards, those ones b does not have must be because:
 - 2.1. In triads announced by a, where card 6 is, there is also at least one of b's cards.
 - 2.2. As each triad must guarantee the safety of the announcement, then no one can be inside the 'true zone' of another player (you can only have total control of your 'true zone'). To be sure, the only one solution passes to include in each one of the triads, at least one proper card number of the announcer.

2.3. In the triads where 6 is, there is also a card from b (as seen just above: 2.1.). Thanks to this b knows these triads as not a's triads. The triads contain also one of a's cards to guarantee the safety of the announcement (as seen at 2.2.).

2.4. Therefore, if b announces, "Cath has card 6", a does not have a triad where 6 is.

3. So c removes these triads from a's announcement, and the result is a 'new' a's announcement: $!012_a \vee 034_a \vee 135_a$

4. c asks herself what is a's hand? To answer, she will be doing the following reasoning:

4.1. In the triads where 6 is (056; 146; 236), there is also one one card of a and another of b, so:

a = 0; 1; 2 then	b = 5; 4; 3
a = 5; 4; 3 then	b = 0; 1; 2
a = 0; 1; 3 then	b = 5; 4; 2
a = 5; 4; 2 then	b = 0; 1; 3
a = 0; 3; 4 then	b = 1; 2; 5
a = 5; 1; 2 then	b = 0; 4; 3
a = 0; 4; 2 then	b = 1; 3; 5
a = 1; 3; 5 then	b = 0; 4; 2

4.2. Next step in c's reasoning is comparing the above triads (4.1.) to the three remaining triads (as seen in 3.): $012_a \vee 034_a \vee 135_a$. The result is that every one of them could be possible because all are compatible with the condition to include one card from a + one card from b + 6.

c's final state of knowledge:

$012_a \vee 034_a \vee 135_a$

a = 0; 1; 2 then b = 5; 4; 3. Therefore 012_a and 543_b

or

a = 0; 3; 4 then b = 1; 2; 5. Therefore 034_a and 125_b

or

$a = 5; 1; 3$ then $b = 0; 4; 2$. Therefore 135_a and 042_b

As the deal has been: $C_{(a)}^3 * C_{(b)}^3 * C_{(c)}^1 = aR(^3_7); bR(^3_4); cR(^1_1) = 140$ deals are possible. At the beginning, c knows she holds 6, so now the possible deals are only the ones where c holds 6, therefore there are 20 possible deals: $C_{(a)}^3 * C_{(b)}^3 = aR(^3_6); bR(^3_3) = 20$. In fact, Cath is only hesitating between three possible deals $[(012_a \wedge 543_b) \vee (034_a \wedge 125_b) \vee (135_a \wedge 042_b)]$, thus c knows 17 deals are not possible. If 20 unknown mean 100% of c's ignorance, then 3 unknown will be 15% of c's ignorance. In this case, Cath has reached knowledge of 85%. In this case c cannot reach more knowledge because no card is common for all three of a's possible deals.

Total c's knowledge is 85%

Total c's ignorance is 15%

Exercise 4.74 (A seven hand solution): Assume deal of cards 012.345.6. Show that the following is a solution: Anne announces: "I have one of {012, 034, 056, 135, 146, 236, 245}" and Bill announces "Cath has card 6". (van DISTMARCH, 2008: 103)

Bill (b) (opponent)		Ann (a) (proposer)		Cath (c) ('mute guest')
2	!6 _c	!012 _a ∨034 _a ∨056 _a ∨135 _a ∨146 _a ∨236 _a ∨245 _a	1	???

What is c thinking after a's and b's announcements?

Now, after doing the previous exercises, c has reached a quite refined method. She knows the procedure is:

1. To take off the triads where her card, 6, is. Then, for this case, the 'new' a's announcement would be: !012_a∨034_a∨135_a∨245_a.

2. She also knows it is not necessary to do step 4.3. That has been done during the first exercise and it was decided not to do it again because it was considered as a not reliable way.

3. Once she knows how the ‘new’ a’s announcement looks (an announcement that will not contain her card in any triad), she needs to compare the resultant possible (a-b)’s deals to the announced triads containing 6, her card.

a-b possible pairs, according to a’s announcement:

a = 0; 1; 2	then	b = 3; 4; 5
a = 0; 3; 4	then	b = 1; 2; 5
a = 1; 3; 5	then	b = 0; 2; 4
a = 2; 4; 5	then	b = 0; 1; 3

Final c’s state of knowledge: After comparing a’s possible deals to the triads including 6 (056; 146; 236) no new knowledge is gained, so:

012_a∨034_a∨135∨245_a.

a = 0; 1; 2 then b = 5; 4; 3. Therefore 012_a and 543_b

or

a = 0; 3; 4 then b = 1; 2; 5. Therefore 034_a and 125_b

or

a = 5; 1; 3 then b = 0; 4; 2. Therefore 135_a and 042_b

or

a = 2; 4; 5 then b = 0; 1; 3. Therefore 135_a and 042_b

As the deal has been: $C_{(a)}^3 * C_{(b)}^3 * C_{(c)}^1 = aR(\binom{3}{7}); bR(\binom{3}{4}); cR(\binom{1}{1}) = 140$ deals are possible. At the beginning, c knows she holds 6, so now the only possible deals are the ones where c holds 6, therefore there are 20 possible deals: $C_{(a)}^3 * C_{(b)}^3 = aR(\binom{3}{6}); bR(\binom{3}{3}) = 20$. However, Cath is only hesitating between four possible deals [(012_a∧543_b)∨(135_a∧042_b)], thus c knows 16 deals are not possible. If 20 unknown deals mean 100% of c’s ignorance, then 4 unknown deals will be 20% of c’s ignorance. In this case, Cath has reached knowledge of 80%. In this c cannot reach more knowledge because no card is common for all four of a’s possible deals.

Total c's knowledge is 80%

Total c's ignorance is 20%

At this point we can consider ourselves ready to deal with the question about the 'mute guest' because, even if we would continue with the rest of the proposed exercises by van Distmarch (2008), we think they are no relevant any more, now that we know the method, so its application will be similar application every time.

Thus, is the 'mute guest' a true 'passive' subject or could he be a 'disguised hacker'? We think the answer is quite clear. In so far as the 'mute guest' is really mute but not deaf, we cannot be so arrogant as to think the 'mute guest' is thinking nothing about that he is hearing. We can never asseverate that he is just hearing and not listening. If he is listening, he could be thinking about it. If he is thinking he will reach some ratio of knowledge. So, a 'mute guest' is not a 'passive' subject for the fact that he is mute, he can be 'passive' (hearing and not listening, then not thinking) or not, that is his choice, nothing else.

Therefore, the chance to have a 'disguised hacker' 'hidden' as the 'mute guest' could be quite high because hacker's performance is just to be 'hidden'; be 'mute' while others are talking; listening and not just hearing; keeping information from the others during the information exchanges; thinking why is that said and not something else and/or in another words, where could be the possible 'gaps' ('gaps' meaning 'information leaks', the information which is said –including silence- in an unsafe form) and then, if 'gaps' are found, he could decide to start the attack or not: professional attacks are not done at random, they are done with some degree of previous knowledge, and knowledge about others is only obtained from themselves. His job is no other than to catch the 'leaking information' and to take advantage of it in the way to conduct a more effective attack. We must be careful, since even when information is passed in a safe form, we cannot be sure if some kind of information is being 'leaked'; information is information anyway, even silence is, as already seen at the previous 'Act'. Thus, a

‘mute guest’ is not the best guest when you want to pass information without being recorded.

Anyway, the existence of ‘mute guests’ enhances the argumentative capacities of the negotiator, he is required to do his announcements as good as possible (both in quality and safety). A ‘mute guest’ could be the best coach for a negotiator. In the next chapter we will talk about two relevant lessons learned from the ‘mute guest’, as negotiators.

Chapter 3.2: Two lessons from the ‘mute guest’

As it has been shown just before, being coached as negotiator in the presence of a ‘mute guest’, a ‘potential hacker’, helps us know how and why he is thinking based in our announced arguments; therefore we can enhance our way of communicating, improve the structure of our announcements –their quality and safety- from the point of view of a syntactic Pattern where the content is expressed. A ‘potential hacker’ is the best mirror we can have; by observing him we can learn the most about the potential ‘gaps’ we have in the negotiation we are preparing, because a hacker is nothing but the worst opponent.

The two great lessons from the ‘mute guest’:

1. He starts thinking ‘hard’ against us when we directly trespass his ‘true zone’ (i.e.: Bill announces: “Cath has card 6”). When anybody feels his ‘true zone’ directly trespassed, the natural reaction is to think ‘why does he say that?’ ‘how can he know?’. Everybody’s ‘true zone’ is the core of his ‘comfort zone’, and nobody likes it to be trespassed, and much less so with a direct allusion. When somebody feels overstepped, he feels in jeopardy. Then there are only two possible reactions: either he fights against this invasion -and the negotiation process is automatically stopped- or he transforms our direct attack into the hardest counterattack we can expect because, as we have seen in the previous chapter, announcing our opponent’s true is the least safe we can do, it is the most revealing we can make, it shows much more our ‘true zone’ than talking about our proper true, like Ann did in her announcement.

Thus, first lesson: the ‘mute guest’ says: ‘do not touch me, please, or at least not shamelessly’.

2. His second lesson is in correspondence with the previous. Now we know that it is not safe to trespass directly our opponent’s ‘true zone’, then how will we be able to attack and remain safe. The best plausible way would be to create our replies to

the opponent's announcements following a similar pattern to the one that we would use to reply a partner in the presence of a hacker. The question is asking ourselves about how could Bill reply Ann and not increase Cath's already acquired knowledge (from Ann's announcement). The way to do it is just the one we use naturally, when we give information not to be understood by a third person: we usually reply repeating the same pattern used before, like 'going along with the same' -but it is not quite the same- (i.e.: Ann announces: "I have one of {012, 034, 056, 135, 146, 236, 245}", then Bill's reply could be just the inverse of the part of announcement already 'caught' by Cath. Thus, Bill's reply could be: 'I have one of {345, 543, 056, 042, 146, 236, 013}'). This adds nothing to Cath's knowledge:

a = 0; 1; 2 then b = 5; 4; 3. Therefore 012_a and 543_b

or

a = 0; 3; 4 then b = 1; 2; 5. Therefore 034_a and 125_b

or

a = 5; 1; 3 then b = 0; 4; 2. Therefore 135_a and 042_b

or

a = 2; 4; 5 then b = 0; 1; 3. Therefore 135_a and 042_b

and

$[K_a(mnp_a) \wedge K_a(m'n'p'_b)] \wedge [K_b(m'n'p'_b) \wedge K_b(mnp_a)] \wedge [K_c(m''_c) \wedge \sim K_c(mnp_a) \wedge \sim K_c(m'n'p'_b)]$

This is not exactly so, however
Cath has no more knowledge
after Ann's announcement

We cannot be so naïve as to believe that we will not touch the 'true zone'/'comfort zone' of our opponent when we are negotiating. We should not undervalue our opponent, and we should prepare the negotiation as if it were a struggle against an intelligent hacker; by doing so, we will do the best we will possibly can.

It is time to check if some more light has been thrown into the darkness.

Chapter 3.3: Dialogical Framework Pattern. A light in the darkness

As we said in the beginning of this ‘Act’, our aim here is to throw some light into the darkness; maybe part of it could be clarified:

- What arguments to choose: we could definitely say that we cannot be totally sure about what arguments, in the meaning of their contents, should be chosen for a negotiation. However, now we know how to choose the best structure (syntactic Pattern) for arguments, since we have learned it from dialogical pattern.

- ‘Indirect shadow’, implicit in the subjectivity of our interlocutor: we cannot guarantee what will be replied to our arguments. We cannot predict its content. However, in the light of the dialogical pattern we can now predict the most plausible/logical syntactic structure for each reply. Thus:

- If we are in the proposer position, then we will be able to know how the agreement could be, depending on syntactic structure of our first announcement.
- If we are in the opponent position, then we will be able to know how the agreement could be, depending on syntactic structure of the proposer’s first announcement.

It is definitely better to be the proposer, since he holds the reins of the negotiation dialogue. Nevertheless, this is not always the case: when somebody is coming to see you, good manners usually require asking him first. For this case different negotiation scenarios have to be prepared because, if you are able to guess what your opponent will say, you are never sure until he starts the discussion.

In any case, it is always better to use the most favourable the dialogical semantical form for us whenever possible. In this case, we will be choosing our defence (structures in green at the table below) and not giving weapons to be attacked with (structures in red at the table below).

Dialogical semantical form

Announcement structure	Attack	Defence
$!\alpha\wedge\beta$ The attacker chooses the defence	$?L_{\wedge}$	$!\alpha$
	$?R_{\wedge}$	$!\beta$
$!\alpha\vee\beta$ The defender chooses the defence	$?_{\vee}$	$!\alpha$
		$!\beta$
$!\alpha\rightarrow\beta$	$!\alpha$ (α is assumed to occur)	$!\beta$
$!\neg\alpha$	$!\alpha$	-----
$!\forall_x A_x$	$?_k$ (k is chosen by the attacker)	$!A_k$
$!\exists_x A_x$	$?_{\exists}$ (could you show me one, please?)	$!A_k$ (k is chosen by the defender)
$!\Box^{36} A_{C_i}$	$?_{C_j} <C_i R C_j>$ (C_j is chosen by the attacker)	$!A_{C_j}$
$!\Diamond^{37} A_{C_i}$	$?_{\Diamond}$ (could you show me a case, please?)	$!A_{C_j} <C_i R C_j>$ (C_j is chosen by the defender)

As rule it can be said that it is better to make announcements under either a disjunctive form, a particular form or a possible form, or a combination of them. Moreover, in the particular case of a conditional announcement (when it is not a literal expression: no literal antecedent and no literal consequent, understanding ‘literal’ as an elementary proposition or its negative form), the best choice is to use:

- the consequent under one of these forms we mentioned just above because then we will receive a ‘favourable’ attack, since these are the cases where the defender has the choice, and

- the antecedent under either an assertion –elementary proposition- a conjunctive form, an universal form or a necessary form, or a combination of them

³⁶ It will be the same in all the cases where there is modal operator: alethic, deontic, epistemic, doxastic, temporal or a combination of them.

³⁷ *Idem.*

because then we will be able to attack back (once our conditional is attacked) since these are the cases where the attacker has the choice. Finally, it should always be kept in mind that negative assertions are automatically interpreted as positive, and they may have consequences opposite of what should be expected. Be extremely careful about this because no defence is possible after it has been said: the attack will be more than an attack, because it has the opposite effect in our mind.

We have gone deeper in syntax and extracted a pattern to make announcements (attacks or defences). Other than that, there is nothing else in a rational framework that may throw light into our shadows.

Through this research we have been able to clarify some dark aspects of the negotiation process. Now, in the next section ('Conclusions') we will propose a protocol to deal with negotiations.

CONCLUSIONS: Negotiating with logical-linguistic protocols in a dialogical framework

In the beginning of this thesis we said that this was an attempt to think how to create logical dialogues to tackle negotiations, meaning: solving conflicts from basic linguistic structures (conjunctions; disjunctions; conditionals) placed under a dialogue form as a cognitive system which ‘understands’ natural language and where there is a permanent feed-back between both.

Thus, time to know if that could be and how to do is arrived. Conclusions will be just to show a possible map, guide to choose the order of arguments in negotiations with the aim to put in the highest the intersection point between the optimization function and satisfaction function. As all negotiations start with a decision, the decision of negotiating about something and the rationality of the decision remains on the side of the objectivity, that is, in optimization, we will offer in this section a kind of protocol that we consider it could be useful to reach that. As a result, the satisfaction will be proportionally direct increased and we can reach a high intersection point.

A protocol for negotiating in a ‘dialogical’ framework

As it is no possible to negotiate in a no-dialogical framework, here ‘dialogical’ is taking in the sense no strictly –although also included- as in logical semantics is taken, that is why is written in single quotation marks. We want to remark that without dialogue no negotiation process could exist, dialogue is the only form under which a negotiation can take place, can be feasible. Therefore, we will offer here a sort of path to deal with them. For that we can imagine the different steps that a negotiation could traverse before to be sat at the negotiation table, how a right negotiation could be prepared:

1. To take as much information about the subject (object/s and goal/s) as we are able to obtain.
2. To analyse each piece of information, even the very small ones. All of them are crucial for preparing a right negotiation process. As much we can understand what,

how and why is happening better will be the protocol we will be designed to tackle it and better the arguments we will choosing to deal with the negotiation.

(Point 1 and 2 are the grounds, better they are done, more solid the negotiation arenas in the two directions: to reach success and to analyse it after in order to take lessons for futures. In this paper, they are represented in the annex, though it is a completed case, because as we already said, future cases cannot possibly prove a hypothesis and we needed to test this protocol in order to know its potential for future cases).

3. To assess if the object/s to negotiate share the same internal structure than the objective/s, issue/s in strict correspondence to its/their goal/s (we will done an example for its inverse: when we need to negotiate just the price –money- to reach something different the more money in itself. In this case issue and its objective do not share the same internal structure. On the contrary, it will be sharing the internal structure in the case we are negotiating the price –money- for a financial product).

4. To evaluate where is the power, if it is very close to the opponents or not.

5. To know if the ‘territory’ is quite stable, if we have the control over the negotiation time and the space, or they are quite unpredictable.

(If the points 3, 4 and 5 are favourable to us: goal/s share the same internal values than the issue/s to negotiate in order to reach it/them; the power is shared or close to us; and the arenas are solid enough, then we are available to continue with the path we are proposing here. If it is not the case then we will not be able to continue the path we are here proposing as it was already showed at page 38).

6. Taking point 3, 4 and 5 as favourable, it is time to make the whole list of the arguments, it means that interlocutor’s arguments are included (definitely, we cannot be sure about them, but we need imagine the scenario). At the moment, paying attention only to their contents, the structure to be expressed is not relevant yet. For choosing

contents will be a great help knowing as better as possible the beliefs and values of our interlocutor and trying to discover how to build a common ‘territory’ of beliefs and values to make arguments be born there (pages 47-48). Besides, be extremely careful with the use of negative sentences (page 45).

7. To class the arguments in function of the different aspects which are shared as the issue/s as the goal/s. In our case, the *1st Camp David Accords*, as an international negotiation they are four: political, financial, social and cultural (as it is obvious, that shall be adapted for each negotiation type).

8. To order inside each selected aspect the classed arguments in function its importance from highest to lowest.

9. To translate the arguments (countless variables) into Bridge cards (countable variables). So, if we decide, for our case, that spades represent the political aspect, then the most relevant argument in that will be converted into the As of spades, so on and so forth (pages 28-32).

10. To play the Bridge game (pages 33-34). (Here, an objection is coming up, it is you could think if some negotiator enjoys this procedure, but he does not know play Bridge, he will not able to continue with this protocol. Well, that is not exactly, because it exists a computer program which works in the opposite, it chooses the deal and it makes the game. At this moment, the algorithm supporting the program is not developed to the maximum but it is possible to enhance it because Bridge is just mathematics³⁸ and a Bridge prototype computer program is already done and it is running –you could take a glance over the BBO (Bridge Base Online) website: <http://www.bridgebase.com/> and to observe how the robot-player works-. So, if the algorithm that is working in the opposite is available, it will be also possible it works in the other direction. That one option it is not available because for Bridge player that will be the antithesis of the game, if you know the result in advance then for what to play.

³⁸ Cf. E. BOREL & A. CHÉRON, 2009.

11. To analyse what happened during the game (pages 34-35). It means, to do the game undo in order to know how the arguments have been played, discovering the pairs. That will give a 'map' about: what gains, what losses, what does not have a correlative argument –in the case one player holds a suit longer than the same suit at the other player-. For these, it is much better to disregard no correlative arguments when the negotiation takes place, because it is not quite elegant ask somebody for something he does not have an answer and also, it is quite ugly to be questioned and to change the subject.

(Since point 3 until here, point 11, Act I is its frame. However, as it is clear, we need to continue improving this protocol. Subjectivity is too much present inside the chosen arguments. We need to increase the quality of the optimization function, leaving as much subjectivity as possible to guarantee a good ratio of satisfaction as a result a very well optimization done).

12. It is time to pay attention to the structure (syntax) of the arguments because a negotiation is not to place a card against other on a table. A negotiation means dialogue, so, countless variables. Once we know our possibilities in terms of 'gains and losses accounting' we must prepare as maximum each argument that will be used and we know that the rational value of true is in syntax (page 43). Therefore the subroutine, appearing here, will be like that:

12.1. To establish the arguments in pairs, so the result for each trick, respecting always the order they have been played.

12.2. To be awareness what our mind presupposes in face a conditional sentence. For it conditional pattern always presupposes a cause-effect (page 44) where if the cause is the case then the effect will also be (page 43).

12.3. Be careful and do not touch directly the interlocutor's 'true zone', therefore, talk always from our 'territory of true'. Therefore, if some of the used

arguments are touching directly the ‘comfort zone’ of our interlocutor, then will need to modify it (page 69).

12.4. To rest safe. Our arguments must be as ‘hidden’ as possible, it means no pass information not strictly needed. So, saying without to discover our game (page 69-70).

12.5. To create the dialogical form for each argument. As we already know the pairs, tricks, we know who works as proponent and who as opponent for each of them. Therefore, we are able to create the right dialogical form for each. In any case, it could be always highly recommendable, to prepare logic dialogues in the two directions, just in case, to be aware. It could be note at this point that we will use harder intuitionistic logic because a negotiation is a process, and as a process, negotiators remain always engaged in the chain of arguments, thus it is not the best way to look for an agreement saying something and to say the opposite later. That is why intuitionistic logic will be much more used. Dialogues in a classical logic framework will be reserved only for the case that after a chain of reasoning, a negotiator thinks that to change the point of view could be better according to the goal reached, and the other negotiator agrees.

Time is arrived: to see the annex again and evaluate the degree of accommodation between the previous research and the path proposed along these pages; to decide if the attempt to solve conflicts (as objective application) from basic linguistic structures (conjunctions; disjunctions; conditionals) placed under a dialogue form as a cognitive system which ‘understands’ natural language and where there is a permanent feed-back between both could be worthy to be put into practice, even to serve peace (as a subjective option, since tools do not have an ethical value in themselves).

Lastly, we would want to indicate some possible research to continue this approach to deal with negotiations. Open ways could be:

- A dialogical analysis for intra-negotiations (inside the same time), because here we are only considered the inter-negotiations. This approach is already taken in account for ourselves with the hope to may start it soon.
- A Hintikka's *GTS* approach for inter-negotiations and for intra-negotiations as well.
- Computer research: algorithms applied to make easy and quick building dialogues into their dialogical form also for the 'hacker' dialogue, probably the most interesting to do in order to get ready in front of possible attacks.
- Philosophical implications and imbrications to tackle negotiation with logical-linguistic protocols in a dialogical framework.

Thank you for reading.

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**ANNEX:
STUDY CASE: *1ST CAMP DAVID ACCORDS*³⁹**

³⁹ A published presentation by M.D. MARTÍNEZ (2012) is also available about this subject.

As it was said at the beginning of this thesis, the *1st Camp David Accords* has been the study case chosen to apply our research. It was the preliminary task.

Our conclusions about how to establish a protocol to find out the best order to use the arguments during a negotiation process had to be proven right or wrong. We needed a ‘territory’ where they could be verified. That is why we chose a completed negotiation case to guarantee an objective application, because there is no possibility to alter the events. The document in the annex should help be assess this research in terms of right or wrong, because the ‘semantical true’ would be otherwise unknown.

To remain faithful and preserve the rigour and the aseptic nature of this research we do not apply any framework that will be applied later, so you will not find any application of the *Game Theory*, neither NLP nor dialogical semantics used across this analysis of the *1st Camp David Accords*.

This negotiation analysis investigates ‘*why were these the agreements reached and not others?*’ because, in fact, this is the only data we really know. To answer this question it will be necessary to analyse each piece of information, even the very small ones. All of them are crucial for the negotiation analysis. When we can understand what happened and why, then, and only then, we can be sure we have a solid ‘territory’ to test our conclusions. Therefore, this document is a proper research work in itself. Such was the case that as said in footnote 8, page 10, it contains its own bibliography section, where you can find specific sources together with other already referred to in the previous bibliography section; these ones are shared sources for both research approaches.

Lastly, we would like to warn the reader that all the underlined text and/or bold text is meant to facilitate the reading of this document, as it is quite long.

*It was on that occasion that the Lord made a covenant with Abraham,
saying:
To your descendants I give this land,
from the Wadi of Egypt to the Great River [Euphrates]
Genesis 15, 18⁴⁰*

⁴⁰ USCCB, *The New American Bible*. Translated by Members of the Catholic Biblical Association of America. Encino (California), Benziger Editor, 1970, p.21.

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INTRODUCTION

This paper has been written thinking of all the people who love logical games, because talking about an international negotiation is keeping in the scene the different elements involved along the study case and finding their relationships.

A paper which tries to analyse an international negotiation must give an answer to the question *'Why were the agreements these, and not others?'* In our specific case, the *Fist Camp David*, the concrete question could be *'Why came the Sinai back to Egypt and not the other territories conquered during the '67 War?'* since this was the direct consequence of the *Camp David Accords (Egyptian-Israeli Peace Treaty, Washington, March 26, 1979)*. Knowing and understanding that is the only possibility to understand the History. When History is understood, then, and only then, it is possible to discuss it. And when we discuss History we are making History. The only aim of analysing an international negotiation is to learn the lessons on which History is daily built. In order to achieve that we need to redo the 'puzzle' of the case from the only part that is really known: the final agreement.

In the following pages we will try to revive the negotiation held during thirteen days in September 1978 in Camp David, between Israel and Egypt, with the mediation of the US. Therefore, we suggest you to forget the known agreements and to start looking for the pieces involved.

Let us start this paper with the key pieces (OCEAN). First will be to answer these questions:

- Which is the **O**bject of the negotiation?
- Which is the **C**ontext of the negotiation?
- Which are the **E**lements of the negotiation?
- How is the **A**symmetrical relationship of power between the different teams involved?
- Who and how are the **N**egotiators (including the mediator, in this case)?

Second, we relate these pieces to each other. Our game is started, we have the pieces and now we begin assembling them. To build this will be necessary wondering about the threads which weave together the **O**bject with the **C**ontext with the **E**lements with the **A**symmetrical relationship of power and with the **N**egotiators. Now we need to answer the following questions:

- Which is the structure of the negotiation?
- The matter of the cultural differences, are they present or not?
- How is the relationship between the different actors involved?
- Which is the strategy deployed?
- How is the process?

Once the different pieces and their relationships have been addressed, our ‘puzzle’ seems finished, but is it really finished? This is the moment to remember the agreement forgotten in the former page and try to fit it in our ‘puzzle’, or decide to skip it. The tighter the pieces the more masterly the lesson learned, which will be used to continue building History along future new negotiations.

To deal with the questions arisen before, we would normally use specific sources, that is, the official documents of *1st Camp David* and the manuals about it or about the international negotiations; the huge amount of literature available –not all of it rigorous- makes it impossible to handle within the scope of this paper. Giving our ‘puzzle’ a logical form required narrowing down the documents from ordinary press sources, as they are usually not specialized. Since the negotiations were held in the most complete privacy, this work has developed starting from the declassified sources, authorized sources and specialized manuals. As with every choice, there are advantages -working with the most accurate sources-, but also disadvantages –skipping the opinions of the world about what happened in *Camp David*-. ‘*What is more real, what the world thinks and believes or what the documents say?*’ People would probably say general opinion is more real; however, we believe that working starting from the direct sources

is better to learn how the negotiation was handled. Another disadvantage of working from the original documents is that not all declassified sources are easily available, e.g.: obtaining the *Briefings to prepare The Camp David Accords* included in the Annex. Another problem was to contrast with experts the conclusion to our hypothesis (*'Why came the Sinai back to Egypt and not the others territories conquered during the '67 war?'*), because authorized and declassified sources explain what happened, but not WHY -or not so clearly-. Showing the true reasons for the agreement requires us to be logical, to look thoroughly through every piece and to contrast the 'findings'.

We invite you in the next pages to look through the different pieces of the negotiation proposed, and to build your personal puzzle with them. Our puzzle and our conclusion, although well founded, are not the only possible true. This work aims to be just a very modest contribution to the search of key elements that help analyse international negotiations.

Please enjoy the paper and remember that the only possible glue for the puzzle pieces is Logic. Good luck in this 'logical game'!!

KEY PIECES (OCEAN)

In this chapter we will analyse the key pieces of our 'puzzle'. Which are they? They are the ones proposed at the introduction of this paper: the **Object**, the **Context**, the **Elements**, the **Asymmetrical power** and the **Negotiators** involved (including the mediator) for this study case (*1st Camp David*). So, we will follow this order; but it has to be remembered at all times that the order proposed is not an order of importance, it is only an order to put forward the pieces involved, as a framework for our work: building the 'puzzle' of *Camp David Accords*. This is why the following questions/pieces will be introduced with a dash and not with a number.

- Which is the Object of the negotiation?

It has to be stated first that the object of a negotiation is not the objective/goal of the negotiation. The goal is always to find an agreement and the object is the matter that we want (more or less willingly) to negotiate.

Our object to negotiate is the sovereignty of the territories occupied by Israel during the *1967 War*, because this is the main motive for the lack of peace in the Middle East. This peace between Israel and the Arab Countries, more specifically, the peace between Israel and Egypt is our true objective, because after the *1967 War* the true peace never came, the conflict became permanent in a higher or lower degree, and the situation in the Middle East is more unstable every day. The world ‘needs’ and ‘wants’ peace in this region, and the region ‘needs’ it too. Eleven years after the *1967 War* the Middle East and the Occidental World wished to set the UN SC RES 242 and 338, but each party according to their own interests.

Let’s see now where are the key points of this object; therefore we will look at the essential paragraph in those two Resolutions of the UN Security Council, which involve controversial points:

UN SC RES 242 (November 22, 1967)

“1. Affirms that the fulfilment of Charter principles requires the establishment of a just lasting peace in the Middle East which should include the application of both the following principles:

- (i) *Withdrawal of Israel armed forces **from territories occupied in the recent conflict**;*
 - (ii) *Termination of all claims or states of belligerency and respect for and acknowledgement of the sovereignty, territorial integrity and **political independence of every State in the area** and their right to live in peace within secure and recognized boundaries free from threats or acts of force;*
2. *Affirms further the necessity*

- (a) *For guaranteeing freedom of navigation through international waterways in the area;*
- (b) *For achieving a just settlement of the refugee problem;*
- (c) *For guaranteeing the territorial inviolability and the political independence of every State in the area through measures including the establishment of demilitarized zones;*⁴¹

UN SC RES 338 (22 of October 1973)

“2. Calls upon the parties concerned to start immediately after the cease-fire the implementation of Security Council resolution 242 (197) in all of its parts;

3. Decides that, immediately and concurrently with cease-fire, negotiations shall start between the parties concerned under appropriate auspices aimed at establishing a just and durable peace in the Middle East.⁴²

Israel and Egypt will be sitting to negotiate the sovereignty on the territories occupied by Israel during the *1967 War* to consolidate the peace in the Middle East, but the controversial point - “(...) **from territories occupied in the recent conflict** (...)”⁴³ - will be the ‘sting’ at the before sentence, which are **“from territories occupied”** Does this mean all territories occupied? or will this sentence be fulfilled if the resolution is applied to just one territory?

For the moment, we agree that the **Object is negotiating the sovereignty of the territories occupied by Israel during the 1967 War**, without going into discussing what is the true meaning of **“from”**.

⁴¹ UN SC RES 242 (1967) Source on line: <http://www.un.org/documents/sc/res/1967/scres67.htm>
Authorized website of the United Nations Security Council.

⁴² UN SC RES 338 (1973) Source on line: <http://www.un.org/documents/sc/res/1973/scres73.htm>
Authorized website of the United Nations Security Council.

⁴³ UN SC RES 242 (1967) Source on line: <http://www.un.org/documents/sc/res/1967/scres67.htm>
Authorized website of the United Nations Security Council.

- Which is the Context of the negotiation?

The context of the negotiation is a regional context, but as the region is **the Middle East, region of paramount importance in the world because of its position: capital geographic position** (gravity centre between Orient and Occident), **capital geopolitical position** (directly deriving from the former), **capital geological position** (because of the riches in its subsoil) and **capital geo-economical** (consequence of the geological wealth). Anything that happens there will be transcendent to the rest of the world. Therefore, **our context is at the same time regional and international.**

We need to remember that **the negotiation occurs in the *Cold War era* context. The support given by the USSR to the Arab States directly involved in this conflict has been clear and evident since the *1967 War*, while the US gave support to Israel.**

The tension grew higher after the last war, *Yom Kippur War* (October 1973), and the risk of a new world war increased. The conflict won a true international dimension. The decision of the US to mediate in favour of an accord between the parties involved, specifically between the more powerful parties on the region (Israel and Egypt), is a strategic and diplomatic decision: on the one hand, the US makes an attempt to pacify the region, being peace the best guarantee to assure control of the region and its economics resources; on the other hand, as the US volunteered as mediator, it appears in front of the world as a saviour of the world and not as a threat to its rival, the USSR. Moreover, the US appears in front of the parties (Israel and Egypt) as a potential true mediator, in spite of its interests and preferences, but also as the true power in the world -in the '70s the USSR power was already in decadence-.

- Which are the Elements of the negotiation?

The elements of the negotiation are not always really true, but their importance is that they are true inside the mind which believes in them. What are the elements inside the minds of our negotiators, including our mediator? Answering this question is really difficult because nobody can be into anybody's mind. In this sense, any answer

will be a little bit daring. Nevertheless, we'll try to give a possible answer, based on the background of knowledge that we have about the conflict being negotiated.

So, we can think that the elements involved are:

- **To Israel: Preserving the territories occupied during the 1967 War** and consolidating its presence and its power in the world. The territories occupied are at the same time a physical thing and a psychological thing with all elements that the psychological things entail (in terms of power and cultural presence).
- **To Egypt: Recovering the territories occupied during the 1967 War**, and with that, raising its power in the Middle East; physical power, because this means that Egypt will become a powerful State in the Middle East -because it would be the only state that could have won something from Israel, so much as recovering the control on the two banks of the Suez Canal-.
- **To the US: To the US the element 'territories occupied' is a very good pretext, the true element to get involved in the negotiation being its need to ensure peace in the area. The US has great economic, strategical and political interests there: on the one hand, the control of the USSR power, and on the other hand to secure the supply for raw materials to cover its needs.**
- How is the Asymmetrical relationship of power between the different teams involved?

Who the mediator is, determined the degree of power asymmetry in this negotiation.

In the context of a bipolar world (*Cold War era -US vs. USSR-*), in which each of the parties (Israel and Egypt) is supported by one of the power blocks (US and USSR), the power balance shifts toward one side from the beginning, even if it is only a psychological effect, by the fact of the US being the 'third' negotiating party (the

mediator). Moreover, playing at home is always an advantage, and here the negotiation takes place in the US. So, **it could be said that Israel starts off as a favourite, since the mediator happens to be Israel's own protector. However, the US mediation will aim to protect first the US own interests in the Middle East. It is the US who has *de facto* the power balance in its hands**, no wonder they volunteered as mediators, so much for the need to warrant its interests as for the ability to show-off muscle –we are at the end of the '70s, still in the *Cold War era* period, and the power of the USSR starts showing the large internal fissures that took the USSR to crumbling down a decade later (1989)-.

- Who and how are the Negotiators (including the mediator, in this case)?

Negotiators are the key piece, they are the subjects of negotiation, therefore they hold the negotiation together. Until now we have looked at the invariable keys, which are independent of the negotiator dealing with them. However, their 'value' changes according to the subject who negotiates with them, thus they might increase or diminish their worth. Negotiators are the 'active' part in negotiation, and they will provide 'revenue' or 'losses' in the course of negotiation.

Let's review the main features of the profile of each one of our subjects, in order to understand how our pieces shall be held together. Those features can be found in the personal history that we know of each one of the subjects:

- **Menachem Begin for Israel:** Polish origin (Brest, August 16, 1913). Attached to the Zionist movement in Poland since 12 years of age. Law Degree in 1935 at the Warsaw University. Outstanding student because of his rhetoric and oratory abilities. After the Nazis invasion of Poland he is captured in his flee by the Soviets and is deported to a labour camp in Siberia. After liberation and having lost his family during Holocaust, he moves to Palestine while serving with the British army as an interpreter. He takes advantage of this position to actively collaborate in overthrowing British power from Palestine and in the illegal immigration of Jews. After

proclamation of the State of Israel he remains very active in the most conservative wing of Judaism, reaching leadership of the Likud bloc (Jewish right party) in 1977. He was the first Israeli Prime Minister to name the Jordan River territories, including the West Bank, using their biblical names (Judea and Samaria). He was also the first Israeli Prime Minister to set foot on Egypt (Ismailia, December 25, 1977), in correspondance to the visit of Sadat, President of Egypt, to Jerusalem one month earlier (November 1977).

From the former data we can infer that Begin's personality will be of the "*Extraversion—being sociable, assertive, talkative*"⁴⁴ type.

- **Anwar el-Sadat for Egypt:** Born in Egypt (December 25, 1918), he went to a British military school in Egypt, however his aim was to overthrow British power from his homeland. After graduating he goes in search of Nasser, and together they start gathering a revolutionary group of military officials. After being in prison for revolutionary activities and for actively collaborating in King Farouk's deposition –a puppet of the British power-, he finally reaches power in the neighbourhood of Nasser –eventually becoming his confidence man-. He was Vicepresident since 1969 to Nasser's death in 1970; Sadat takes then office as President of Egypt. After their defeat in the *Yom Kippur War* in 1973 and the urgent state of need of the country, Sadat reoriented his Foreign Policy addressing its force towards the Arab League and the fight against the State of Israel seems unwise under the circumstances: their backing power, the USSR is showing increasing signs of decadence; Egypt is going through a period of need after the two defeats in front of Israel. This situation requires accepting the US help and starting to look towards the West in a more open manner, fighting out suspicion. On November 1977 Sadat, invited by the Israeli Prime Minister Begin, visits Jerusalem with the aim of starting a peace process in the Middle East.

⁴⁴ **Barrick and Mount**, 1991. Quoted in: R. **Lewicki**, Bruce **Barry** & David **Saunders**, *Essentials of Negotiation*. New York, McGraw-Hill, 2004, p. 429.

From the former data we can infer that Sadat's personality will be of the "*Conscientiousness—being responsible, organized, achievement oriented*"⁴⁵ type.

- **Jimmy Carter for the US (mediator):** Born and raised in the State of Georgia (October 1, 1924), in the South East of the US. The son of farmers and active Christian Baptist throughout his life. He got a degree in Science and was a member of the Office of Naval Intelligence, adscribed to submarine missions. He started his political career on the late '50s. He became President of the US for the Democrat party on January 20, 1977. Among the priorities for his term was the creation of the Department of Energy Organization and the Energy Security 'Act'⁴⁶. He signed a new anti-ballistic agreement with the USSR (*SALT II*. Vienna, 1979). He also established diplomatic relations between the US and the Popular Republic of China.

From the former data we can infer that Carter's personality will be of the "*Agreeableness—being flexible, cooperative, trusting*"⁴⁷ type.

Once our key pieces have been analysed, in the view of the personalities of the actors in the play, we may start thinking that the negotiation will take place within the tension between *competing* and *collaborating*, but with a clear trend towards *competing*. Carter's tough work throughout the negotiations is to conduct such tension toward a result of *compromising*. In fact, Carter is aware of the strong need for *compromising* in the *Briefings to prepare The Camp David Accords*:

"-- Both master manipulators, utilizing basically two different personality styles in order to achieve power and control. Begin concentrates on tactics and details, broad

⁴⁵ *Ibidem*.

⁴⁶ Source on line: <http://www.jimmycarterlibrary.gov/documents/keylegis.phtml> Authorized website of Jimmy Carter's Presidency.

⁴⁷ **Barrick and Mount**, 1991. Quoted in: R. **Lewicki**, Bruce **Barry** & David **Saunders**, *opus cit.*, p. 429.

dramatic gestures. In each case, this allows them to avoid making hard decisions. The intermediary trying to bring Sadat the conceptualist and Begin the Talmudic scholar together will have to move each man away from his preferred political (and psychological) style.

-- In dealing with Begin, avoid entering into word definitions. Allow him to make his basic point without interference and then point him to the intended objective. Begin's concentration on detail is basically an evasive, controlling technique which can be overcome by summarizing succinctly his point of view and then redirecting him back to the mainstream of the discussions.

In contrast, Sadat will need more guidance, direction, and limit-setting. Left alone, he may get involved in ambiguities and generalities. The President can take advantage of this style by summarizing Sadat's basic intent in such a way that it appears that there are greater points of agreement with Begin than would otherwise be the case."⁴⁸

Now we have the puzzle pieces, and now we can foresee the degree of *assertiveness*↔*competitiveness* in which the relationships among the pieces will proceed. This is the time to go one step forward: towards a more thorough analysis of the relationships among those pieces.

THE THREADS THAT WEAVE TOGETHER THE KEY PIECES

Our pieces, impersonated by our two main characters Begin and Sadat, need to reach *BATNA* (**B**est **A**lternative **T**o a **N**egotiated **A**greement) in order to assemble nicely; however, in sight of the two personalities, the start point is a *bargaining* situation. How to change it into a *win-win* situation will require a long development. Let's now analyse the different elements that compose the path to *BATNA*.

⁴⁸ VANCE, C.R., 1978: TAB 4: "Considerations for Conducting the Summit Meetings", p. 3.

As happened with the order of introduction of the key pieces, the elements of the negotiation that will be introduced hereafter will not be presented following an order of importance, because all of them have a part in the assembling of our puzzle. This is why the following questions/pieces will be introduced with a dash and not with a number.

- Which is the structure of the negotiation?

Analysing the structure of a negotiation gives us, as W. Zartman puts it, “*a skeleton key*”⁴⁹ in order to understand how our pieces moved and reached their final relationship; we could say that the structure is the scaffold where we can walk, while always keeping in mind the flexibility limits of such a structure.

In our case, we have a triangular scaffold, each one of our actors (Negotiators) in a vertex. Begin and Sadat are in the base vertices, whereas Carter is in the apex. This triangle is circumscribed by the circle of Context. The triangle sides are the Elements to be negotiated; the angular tension will be given by the degree of power Asymmetry; in this case there will be some tilt in favour of Israel and the US, as we have seen before, creating two angles of $<60^\circ$, whereas Egypt angle will be $>60^\circ$. The area inscribed in the triangle will be the Object of negotiation.

We have already described our scaffold/skeleton. For the moment, this is an inert shape, it is what is given. How to go from static to dynamic, from the *bargaining* attitude to a possible *win-win* attitude, this will be the task of the mediator. Carter has to find the ‘integral function’ of the vectors that are present in the triangle, concentrate them in their incenter, and thus achieve the Objective of the negotiation.

So, we are in front of a circumscribed triangle shape that will be forced in an attempt of changing it into a **point** structure circumscribed by a Context that will have been modified by the direct action of the integration of the triangle in a point. The change from one scaffold shape to the other will be determined by the answer to the

⁴⁹ I. William **Zartman**, “*The Structure of Negotiation*”. In: *International Negotiation. Analysis, Approaches, Issues*, by Victor A. **Kremenyuk** (ed.). San Francisco, Jossey-Bass Inc. Publishers, 1991, p. 65.

following four questions: the underlying cultures, the relationship/behaviour between the actors, the unfolded strategy and the process implied. The strategy will be determined by the relationship between the actors, and it will undoubtedly be influenced by the deepest cultural roots in each of them; in the deepest, human beings make decisions based in their beliefs –not only religious- but the deepest, more transcendent beliefs.

Now we inquire about the cultural background of each actor, so to understand later their mutual relationships, and further the strategy that each of them will display during the process. Finally, the analysis of the process will provide us a global vision of what happened and why. We can obtain the *formula* (the function of the integral defining the convergence area –incenter-, however not completely perfect, because that is how integrals are, since the differential coefficient has to be ideally 0, or as near as possible; anyway, our function is nothing but the mathematical expression of *BATNA*).

- The matter of the cultural differences, are they present or not?

An evident answer is *YES*, our actors come from different cultures: Begin from Judaism, Sadat from Muslim and Carter from Christian culture. But the three of them share one point: all three are compromised with the religion of their culture. This is their common point; therefore, here is where we base the function that we want to start building.

We should take into account that the cultural value will be stronger in Begin and Sadat than in Carter, because in the Jewish and Muslim cultures there is only a narrow separation between religious and political power. The fact that Carter shares with the others the worth of religion makes him a suitable mediator, since he knows the keys with which religion can re-ligate people. To find a meeting point among these apparently dissimilar cultures will be Carter's heavy task: "(...) *At points of resistance, the President may remind them that they already share*

objectives in common. The Summit meetings are a means of discovering those points of similarity. The objective is to minimize their real differences and maximize their apparent similarities.”⁵⁰

The point that would minimize their real differences and maximize their apparent similarities is to be found in their deepest, in the main root of all that they believe; only by knowing this can a strategy be designed and a process understood -especially in this case, in which the Object are the lands/boundaries between states with different cultures-: “(...) *This is an especially challenging (negotiation) because cross-cultural and international negotiations add a level of complexity significantly greater than within-culture negotiations. (...).*

(...) This complexity is a source of frustration for many cross-cultural negotiators, who would like clearer practical guidance when negotiating across borders.”⁵¹

Zartman states that: “*Culture is indeed relevant to the understanding of the negotiation process—every bit as relevant as breakfast and too much the same extent. Like the particular type of breakfast the negotiators ate, culture is cited primarily for its negative effects. Yet even the best understanding of any such effect is tautological, its measure vague, and its role in the process basically epiphenomenal.*”⁵² **Let’s use the New Encyclopædia Britannica definition: “Culture, the integrate pattern of human Knowledge, belief and behaviour. Culture thus defined consists of language, ideas, beliefs, customs, taboos, codes, institutions, tools, techniques, works of art, rituals, ceremonies and other related components; and the development of culture depends**

⁵⁰ VANCE, C.R., 1978: TAB 4: “*Considerations for Conducting the Summit Meetings*”, p. 1.

⁵¹ R. Lewicki, Bruce Barry & David Saunders, *opus cit.*, p. 443.

⁵² I. William Zartman, “*A Skeptic’s View*”. In: *Culture and Negotiation. The Resolution of Water Disputes*, by Guy Oliver Faure & Jeffrey Z. Rubin (eds.). Newbury Park (California), SAGE Publications, Inc., 1993, p. 17.

*upon man's capacity to learn and to transmit knowledge to succeeding generations. (1990, Vol.3, p. 784)*⁵³

In the present case, culture (religion, in a more generic sense) is what provides a "(...) *bridge between the two sides (...)*"⁵⁴ Thus, this will be our start point, this is, the symbol of the integral function will be defined by the experience of the religious fact, and this will enshrine and specifically characterize our function. Now it is time to reconsider the function itself and its properties –as a set of several elements: the actors-, the relationship among its elements ('reflexive', 'symmetric' and 'transitive'), seeing them as elements constituting one ensemble.

- How is the relationship between the different actors involved?

Asking this brings up directly the question the *behaviour* that our actors will show and their interactions. The question is really about the 'reflexive property' of our function, because the insulation imposed on the negotiators has them in a closed system in which their only relationship is with each other. Their personalities and beliefs –in a wide sense- define their relationships toward themselves.

Thus we can expect a relationship that will be falling on itself, dotted by the reiterative rhythm of religious fundamentalism between Begin and Sadat, giving their relationship a marked authoritarian character, accompanied by the peal of unmatched notes, Carter, who, understanding this fundamentalism, can fall on it, ringing, aiming at cracking it in order to open a gate to *integrative* dialogue, breaking the *distributive* rhythm that the others intend to set. With this aim in mind Carter sets the pace of the meetings reaffirming whatever links the

⁵³ Quoted by Winfried Lang, "A Professional's View". In: *Culture and Negotiation. The Resolution of Water Disputes*, by Guy Oliver Faure & Jeffrey Z. Rubin (eds.). Newbury Park (California), SAGE Publications, Inc., 1993, p. 38.

⁵⁴ Jeswald W. Salacuse, "Implications for Practitioners". In: *Culture and Negotiation. The Resolution of Water Disputes*, by Guy Oliver Faure & Jeffrey Z. Rubin (eds.). Newbury Park (California), SAGE Publications, Inc., 1993, p. 204.

negotiators and eluding or postponing whatever divides them: “The pivotal issue in the talks will be Israel’s need to know whether they can get an agreement on the Sinai and what price they must pay for it in concessions on the West Bank. You will want to clarify with Sadat in your opening session that the prospect of an agreement there will be the major incentive for Israel. The more precise he can be about a final, if phased, agreement there the more he can seek in the West Bank/Gaza in return.”⁵⁵

- Which is the strategy deployed?

Once we know the nature (culture/religion) that will determine the ‘reflexive’ relationship, we want to know about its expression beyond its relationship with itself. This is, we want to know about the strategies the actors are going to put beside their actions. Every *cause* inevitably produces a *feed-back effect*. Thus, analyzing the strategy developed in a negotiation will be analyzing the ‘symmetric property’ of the elements in our function.

The strategy is just the actors’ estimation about how they will proceed. It is determined by the personality of each of them and by the goals they wish to obtain as result of the negotiation process. So, our strategy will be more or less effective depending on the self-control we can exert when expressing our personality, and on the definition of our goals: “*Effective goals must be concrete, specific, and measurable. The less concrete and measurable our goals are, the harder it is to (a) communicate to the other party what we want, (b) understand what the other party wants, and (c) determine whether an offer on the table satisfies our goals. (...)*”⁵⁶. The strategy is the frame in which the negotiation process will develop. The choice of certain tactics to implement the planned strategy may also have an effect in the final outcome of the negotiation: “*(...) Although the line between strategy and tactics may seem fuzzy, one major difference is that of scale, or immediacy (Quinn, 1991). Tactics are short-term, adaptive*

⁵⁵ VANCE, C.R., 1978: TAB 1: “*An Overview of the Camp David Talks*”, p. 2.

⁵⁶ R. Lewicki, Bruce Barry & David Saunders, *opus cit.*, p. 109.

*moves designed to enact or pursue broad (or higher-level) strategies, which in turn provide stability, continuity, and direction for tactical behaviours.*⁵⁷

In our case we can infer that, in the beginning, *cause*↔*effect* relationships will be marked by *competition*. Begin and Sadat both want peace in the Middle East, but their disposition to *collaboration* is weak. Their strategy will be to try to get as much as possible from their opponent while yielding nothing or as little as possible of their own. Carter's strategy will be to gently bring them to a position closer to *integration-collaboration*. Apparently, Carter works from an *accommodation* plane; thus he prioritizes a good *relational outcome* over good *substantive outcomes*, thus securing their very existence. This strategy looks for points of deep connection, in order to build on them an agreement over the differences: "(...) *The objective is to minimize their real differences and maximize their apparent similarities.*"⁵⁸

The mediator's strategy is necessary to gradually turn the symmetrical *cause*↔*effect* relationship between the negotiators into a more constructive, less destructive one. Finally reaching *BATNA* will be, if not an absolute *collaboration* at least a *bargaining mix* because for a constructive relationship "(...) *agreement is necessary on several issues: the price, the closing date of (...), renovations to (...)*"⁵⁹

- How is the process?

The negotiation process can be summarized as the development of the 'transitive property', since the implementation of the strategy creates not only a 'symmetry' relationship, determined by the *feed-back* of the *cause*↔*effect* relationship, but also a yet unaccounted for effect produced by our tactical acts, a sort of 'third party'.

⁵⁷ *Ibidem*, p.110-111.

⁵⁸ VANCE, C.R., 1978: TAB 4: "*Considerations for Conducting the Summit Meetings*", p. 1.

⁵⁹ R. Lewicki, Bruce Barry & David Saunders, *opus cit.*, p. 38.

Therefore, the process leading to accomplish some type of *agreements*, of a greater or lesser extent, in accordance with our *goals*, depends largely on the process development and its effects on all the participating actors.

Taking all that into account, together with the negotiation timing, let's now analyse each one of its phases⁶⁰:

- **Phase 1: *Preparation***: (February 14, 1977 to September 5, 1978). On February 14, Carter takes the initiative of writing letters to Sadat and Rabin (Israeli Prime Minister at the time), at the request of his State Secretary -C. Vance- at his return from a mission in the Middle East, urging them to start peace negotiations for the area: “(...) *I look forward to meeting whit you personally at the earliest opportunity. I have asked Secretary Vance to discuss when and how our first meeting might be arranged. In view of the importance of Egypt in our common pursuit of peace (...). The growing friendship and cooperation between Egypt and the United States have already brought us some steps along the path to peace*”⁶¹ “*I am confident that US-Israeli relations will continue on the cordial and sound basis that has characterized the close ties between our countries and peoples for three decades. I look forward to working closely whit you in our common search for a lasting peace settlement in the Middle East.*”⁶² From that day to the

⁶⁰ We take up the *phases* as they are proposed on page 117, figure 4.3. In: R. **Lewicki**, Bruce **Barry** & David **Saunders**, *opus cit.*

⁶¹ **Document 1**: Letter from President Jimmy Carter to President Anwar Sadat of Egypt. It was written during the first month of President Carter's administration. Document declassified on October 3, 1997. In: **The Camp David Accords after Twenty-Five Years. “Twenty-Five Documents After Twenty-Five Years”**. Source on line: http://www.jimmycarterlibrary.gov/documents/campdavid25/campdavid25_documents.phtml Authorized website of Jimmy Carter's Presidency.

⁶² **Document 2**: Letter from President Jimmy Carter to President Yitzhak Rabin of Israel. It was written during the first month of President Carter's administration. Document declassified on December 11, 1998. In: **The Camp David Accords after Twenty-Five Years. “Twenty-Five Documents After Twenty-Five Years”**. Source on line: http://www.jimmycarterlibrary.gov/documents/campdavid25/campdavid25_documents.phtml Authorized website of Jimmy Carter's Presidency.

start of the negotiations in Camp David (September 6, 1978) the countries involved prepared the negotiation meticulously, since the interests at stake were of paramount importance to each one of them, as we have seen already.

- **Phase 2: *Relationship building***: The relationships between our actors have been modelled during the *Preparation Phase*. We should remark here that the position of the US is that of an impartial mediator. For this, Carter has a private meeting with each of the other two negotiators in the morning of September 6, with the aim to create an atmosphere of confidence during the negotiations: “(...) *seeking to build a common recognition of the unique opportunity these talks offer, the responsibility to history the three of them share, and the need to grasp the nettle now. He could emphasize that the negotiations have reached a stage where only heads of government can break the impasse, and therefore each side must try understand the other’s political problems. (...) Since each side will have as an objective capturing the US, the President with sympathy for each side’s interests **will have to establish the independence of the US position**. Each will want a sense of special relationship with us; we will want to be close to each without being in either’s pocket. (...)”⁶³*
- **Phase 3: *Information gathering***: This is the time when all the actors meet to explain to each other what has brought them to this gathering and what do they expect to get from it. This meeting took place in the afternoon of September 6: “*Later in the day, the three men used the patio outside Aspen for further discussions. They talked about three issues: 1) the Sinai Peninsula between Egypt and Israel, 2) the ownership of the West Bank and Gaza areas bordering Israel, and 3) the role that Palestinian people would have in governing themselves.*”⁶⁴

⁶³ VANCE, C.R., 1978: TAB 2: “*A scenario for Camp David*”, p. 2.

⁶⁴ **September 6**. Source on line:

http://www.jimmycarterlibrary.gov/documents/campdavid25/campdavid25_thirteendays.phtml

Authorized website of Jimmy Carter’s Presidency for the Camp David Accords.

- **Phase 4: *Information using***: Here our actors will express themselves with regard to the way in which an *agreement* will be possible about the three points exposed in the former phase. Along this phase the constraints/preferences for an eventual *agreement* will become apparent. This is the hardest part of the negotiation: the subjects to be discussed affect Sadat and Begin directly: sovereignty, security and economy (the three pillars of all foreign policy), with the aggravating circumstance of having to talk about Jerusalem, a holy city for Jews and Muslims, and a necessary subject when discussing the territories occupied during the 1967 War. This phase started in the morning of Thursday September 7, and was finished by Carter in the night of Tuesday September 12 when, in view of the sterility of endless discussions, he decides to assertively intervene by choosing the less problematic issue, the Sinai, to set a *framework* for an *agreement*: “*I decided to work that afternoon on the terms for an Egyptian-Israeli treaty, and spread the Sinai maps out on the dining table to begin this task, writing the proposed agreement on a yellow scratch pad.*”--Jimmy Carter from *Keeping Faith*⁶⁵
- **Phase 5: *Bidding***: This is the most difficult time of the negotiation. The positions of Sadat and Begin seem irreconcilable and Carter fears not to reach an *agreement*. But peace in the Middle East is crucial for the US interests and Carter decides to ‘impose’ peace in the region: “*Determined to reach agreement on a framework for peace, Carter and Vance spent eleven hours with Aharon Barak from Israel and Osama el-Baz from Egypt to work out the detailed language of the framework proposal. As they hammered out the language of each phrase, both Barak and el-Baz demonstrated their astute legal minds and their excellent knowledge of English. When differences in language stopped progress, President Carter suggested that*

⁶⁵ **September 12.** Source on line:

http://www.jimmycarterlibrary.gov/documents/campdavid25/campdavid25_thirteendays.phtml

Authorized website of Jimmy Carter’s Presidency for the Camp David Accords.

"West Bank" be used in the English and Arabic texts, while "Judea and Samaria" be used in the Hebrew version; "Palestinians" in the English and Arabic, yet "Palestinian Arabs" in the Hebrew. He would explain the change in a letter to Begin. The letter would be attached to any formal agreement they would reach. The letter exchange idea became a critical factor in making progress toward agreement."⁶⁶ In spite of Carter's efforts, the negotiation is in a deadlock of bargaining-bargaining: *"We can go no further."*- Carter.

"I am leaving."- Sadat.

President Sadat could not agree to leave Israeli settlements and airfields in the Sinai Peninsula, and Prime Minister Begin could not agree to remove these settlements. Without agreement on these issues, there did not appear to be any way to continue. Carter had already told the delegations that Sunday, September 17, would be the last day of the meetings. He had requested that all the delegations work on a joint statement about the meetings, emphasizing the positive accomplishments."⁶⁷ In this critical situation, and with only 48 hours left, Carter plays his only winning trick reminding Egypt of the importance of collaborating with Israel and changing their own attitude in order to reach a peace agreement, since future Egypt-US relationships depend on this: *"I explained to [Sadat] the extremely serious consequences... that his action would harm the relationship between Egypt and the United States, he would be violating his personal promise to me... [and] damage one of my most precious possessions-- his friendship and our mutual trust."* --Jimmy Carter from *Keeping Faith*⁶⁸. Next morning he addressed Begin's iron position: *"Ultimatum, Excessive Demands, Suicide"*-Begin.

⁶⁶ **September 13.** *Ibidem.*

⁶⁷ **September 15.** *Ibidem.*

⁶⁸ **September 15.** Source on line:

http://www.jimmycarterlibrary.gov/documents/campdavid25/campdavid25_thirteendays.phtml

Authorized website of Jimmy Carter's Presidency for the Camp David Accords.

*Even though the progress of the talks was faltering, Carter's determination to reach agreement remained strong. In another negotiating session with Begin, Barak, and Dayan, Carter and Vance made a case for peace, going through the Sinai framework and the Framework for Peace line by line.*⁶⁹

- **Phase 6: *Closing de deal*:** Carter's words to Sadat had an effect as expected, and next day -September 16- a safe path was tended toward the *peace agreement*: "*Carter explained to Begin that Sadat would not continue negotiations toward a peace treaty until the Israeli settlements in the Sinai region were removed. After a storm of protest, Begin finally agreed to submit the question of settlements to the Israeli Knesset for a decision--If any agreement is reached on all other Sinai issues, will all the settlers be withdrawn? He even promised to allow each Knesset and Cabinet member to vote individually, without the requirements of political party loyalty. This was acceptable to Sadat!*

Carter explained to Sadat that Begin would not allow the phrase "inadmissibility of acquisition of territory by war" to be part of the Framework for Peace. [1967 U.N. Resolution 242, which contains this phrase, is to be found in the annex of the Framework. Begin claimed that it did not apply to Israel because the 1967 War was a defensive war for his country.] Begin insisted that only permanent residents of the West Bank and Gaza areas, not all Palestinians, participate in future peace negotiations. Sadat agreed to write one letter defining Egypt's role in these negotiations and one letter stating his position on an undivided Jerusalem. This was acceptable to Begin!

*All through the meetings, Carter continued to remind Sadat and Begin how much each had to gain in making peace.*⁷⁰

⁶⁹ September 16. *Ibidem*.

⁷⁰ September 16. *Ibidem*.

In the end, there is a *formula*, our integral has been defined, a point of convergence has been reached: the incenter of our triangle.

- **Phase 7: Implementing the agreement:** This is the moment to define how, when and where will the *agreements* be implemented. This is the moment to draw the circumference that circumscribes our encounter point.

Thus, on Sunday September 17, 1978, two agreements are reached: a *Framework for Peace in the Middle East* and a *Framework for the Conclusion of a Peace Treaty between Egypt and Israel*. Both were signed by the three leaders -Anwar al-Sadat, Menachem Begin and Jimmy Carter- that same day at the official signing ceremony of the *Camp David Accords* in Washington.

At this point of our analysis, the pieces of the puzzle are already in place. We were able to move from a *distributive* structure to an *integrative* one, since an *agreement* has been reached, meeting our *goals*. But there is still one more step to go in our analysis process, because, as every ‘integral’, ours will also have a ‘differential coefficient’; what will be ours? This is the question we will address next.

THE KEY PIECE: THE AGREEMENT. LEVEL OF ACCOMMODATION

Our ‘differential coefficient’ will allow us understand the adjustment/*agreement* of the negotiation. Our question now should be what has been the ‘differential coefficient’ here, and why this coefficient -and only this one- has made it possible to reach our *goal*, peace in the Middle East. Ultimately, the ‘differential’ is the crux of the matter, since it is what gives us the key to give a logical answer to the question posed in

the introduction: *'Why were the agreements these, and not others?'* Then, let's analyse the final documents of *Camp David Accords*:

The Camp David Accords

The Framework for Peace in the Middle East

Preamble

"The search for peace in the Middle East must be guided by the following:

- ***The agreed basis for a peaceful settlement of the conflict between Israel and its neighbors is United Nations Security Council Resolution 242, in all its parts.***
- *After four wars during 30 years, despite intensive human efforts, the Middle East, which is the cradle of civilization and the birthplace of three great religions, does not enjoy the blessings of peace. The people of the Middle East yearn for peace so that the vast human and natural resources of the region can be turned to the pursuits of peace and so that this area can become a model for coexistence and cooperation among nations.*
- *The historic initiative of President Sadat in visiting Jerusalem and the reception accorded to him by the parliament, government and people of Israel, and the reciprocal visit of Prime Minister Begin to Ismailia, the peace proposals made by both leaders, as well as the warm reception of these missions by the peoples of both countries, have created an unprecedented opportunity for peace which must not be lost if this generation and future generations are to be spared the tragedies of war.*
- *The provisions of the Charter of the United Nations and the other accepted norms of international law and legitimacy now provide accepted standards for the conduct of relations among all states.*
- *To achieve a relationship of peace, in the spirit of Article 2 of the United Nations Charter, future negotiations between Israel and any neighbor prepared*

to negotiate peace and security with it are necessary for the purpose of carrying out all the provisions and principles of Resolutions 242 and 338.

- *Peace requires respect for the sovereignty, territorial integrity and political independence of every state in the area and their right to live in peace within secure and recognized boundaries free from threats or acts of force. Progress toward that goal can accelerate movement toward a new era of reconciliation in the Middle East marked by cooperation in promoting economic development, in maintaining stability and in assuring security.*
- *Security is enhanced by a relationship of peace and by cooperation between nations which enjoy normal relations. In addition, under the terms of peace treaties, the parties can, on the basis of reciprocity, agree to special security arrangements such as demilitarized zones, limited armaments areas, early warning stations, the presence of international forces, liaison, agreed measures for monitoring and other arrangements that they agree are useful.*⁷¹

As we see here, the compromise to abide by UN SC RES 242 (1967) and UN SC RES 338 (1973) is to be reached only after previous settlement with each of the concerned States; a negotiation with every one of them is necessary, so that we can give a preliminary answer: after the first document, only one more document, focusing on Egypt, can be issued, for Egypt was the only represented party at the end of the negotiations. That is how the second *Camp David* document came - *Framework for the Conclusion of a Peace Treaty between Egypt and Israel*-. Let's find out what this document has to say about our initial question 'Why were the agreements these, and not others?':

The Camp David Accords

Framework for the Conclusion of a Peace Treaty between Egypt and Israel

⁷¹ *The Camp David Accords. The Framework for Peace in the Middle East.* Source on line: <http://www.jimmycarterlibrary.gov/documents/campdavid/accords.phtml> Authorized website of Jimmy Carter's Presidency.

“It is agreed that:

- *The site of the negotiations will be under a United Nations flag at a location or locations to be mutually agreed.*
- *All of the principles of U.N. Resolution 242 will apply in this resolution of the dispute between Israel and Egypt.*
- *Unless otherwise mutually agreed, terms of the peace treaty will be implemented between two and three years after the peace treaty is signed.*
- *The following matters are agreed between the parties:*
 1. **the full exercise of Egyptian sovereignty up to the internationally recognized border between Egypt and mandated Palestine;**
 2. **the withdrawal of Israeli armed forces from the Sinai;**
 3. *the use of airfields left by the Israelis near al-Arish, Rafah, Ras en-Naqb, and Sharm el-Sheikh for civilian purposes only, including possible commercial use only by all nations;*
 4. *the right of free passage by ships of Israel through the Gulf of Suez and the Suez Canal on the basis of the Constantinople Convention of 1888 applying to all nations; the Strait of Tiran and Gulf of Aqaba are international waterways to be open to all nations for unimpeded and nonsuspendable freedom of navigation and overflight;*
 5. *the construction of a highway between the Sinai and Jordan near Eilat with guaranteed free and peaceful passage by Egypt and Jordan; and*
 6. *the stationing of military forces listed below.”*⁷²

Now we do have all the keys: the presence of Egypt was necessary to create a working agreement in favour of achieving peace, but it was not sufficient to

⁷² *The Camp David Accords. Framework for the Conclusion of a Peace Treaty between Egypt and Israel.* Source on line: <http://www.jimmycarterlibrary.gov/documents/campdavid/frame.phtml> Authorized website of Jimmy Carter’s Presidency.

reach such an agreement. Where is the key for ‘sufficiency’? It lies just in mentioning which were the territories belonging to Egypt before the ‘67 War, namely Sinai and Gaza. It is now when we are ready to ask the ‘big’ question: ‘Why came the Sinai back to Egypt and not the other territories conquered during the ‘67 War?’ The answer is just a few lines behind: “1. the full exercise of Egyptian sovereignty up to the internationally recognized border between Egypt and mandated Palestine.”⁷³ At this point it seems that everything is solved and the puzzle has been perfectly assembled; but incisive minds may have yet another question: ‘Why does Egypt acknowledge the limits to its sovereignty at the border between itself and the Palestinian territories?’ This is just the meaning of Egypt acceding to ‘recover’ Sinai but not Gaza. The answer is to be found in *al Quran*, in a *Surah* which Begin mentioned to Sadat when he learned of his wish to visit Jerusalem (November 11, 1977):

—“*Your President said, two days ago, that he will be ready to come to Jerusalem, to our Parliament –the Knesset- in order to prevent one Egyptian soldier from being wounded. It is a good statement. I have already welcomed it, and it will be pleasure to welcome and receive your President with the traditional hospitality you and we have inherited from our common father, Abraham. And I, for my part, will, of course, be ready to come to your capital, Cairo, for the same purpose: No more wars – peace- a real peace, and for ever. It is in the Holy Koran, in Surah 5, that our right to this Land was stated and sanctified. May I read to you this eternal Surah:*

“Recall when Moses said to his people: Oh my people, remember the goodness of Allah towards you when He appointed prophets amongst you.... Oh my people, enter the Holy Land which Allah hath written down as yours...”⁷⁴

⁷³ *Ibidem.*

⁷⁴ For wider information, here is the transcription of the complete text from *al Quran* that Begin quoted. I take the text in Spanish, preferring, because of its key role in the perception of our case, an accurate translation from the original text than risking a free translation to English or taking an unwarranted on line English version of the original Arabic. **Surah 5, 22-28:** “22. Cuando Moisés dijo a los israelitas: acordaos de los beneficios que habéis recibido de Dios; ha suscitado profetas en vuestro seno, os ha dado

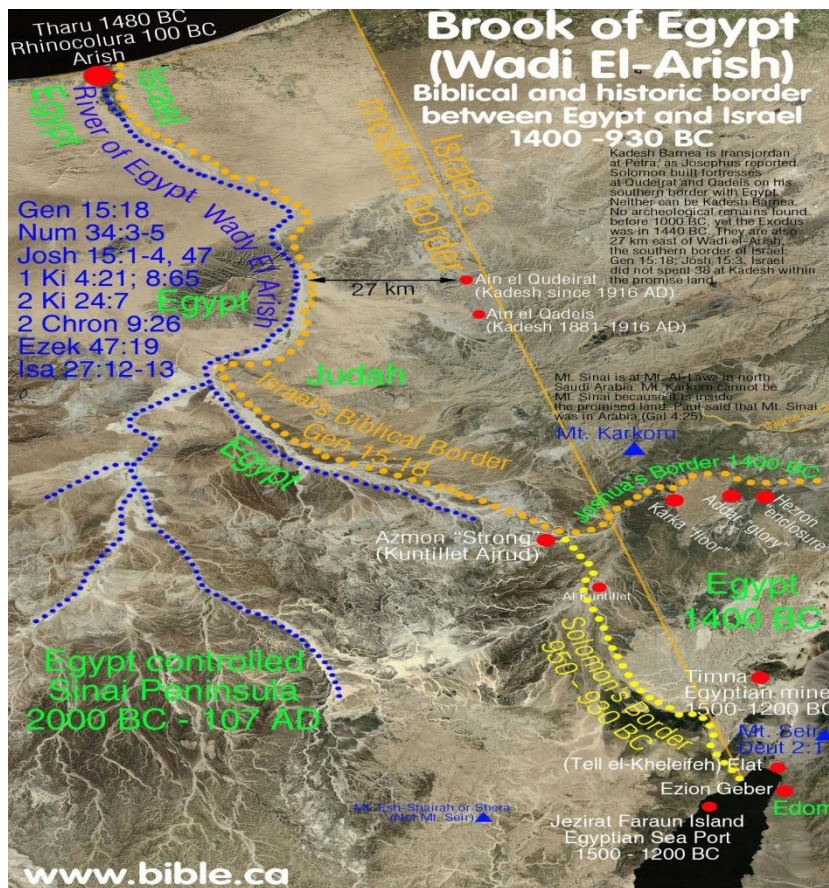
It is in this spirit of our common belief in God, in Divine Providence, in right and in justice, in all great human values which were handed down to you by the Prophet Mohammed and by our Prophets –Moses, Yeshayahu, Yermiyahu, Yehezkiel- it is in this human spirit that I say to you with all my heart: Shalom. It means Sulh.”—⁷⁵

Now, to finish we shall round-up the question, in an almost rhetorical manner: ‘What is Begin’s basis?’ ‘What is the preexisting foundation that will validate his words?’ “It was on that occasion that the Lord made a covenant with Abraham, saying: To your descendants I give this land, from the Wadi of Egypt to the Great River [Euphrates]” (Gn. 15, 18)⁷⁶

reyes, os ha concedido favores que no ha concedido jamás a nación ninguna. 23. Entra, ¡oh pueblo mío!, en la tierra santa que Dios te ha destinado; no volváis atrás por temor a que os encaminéis a vuestra perdición. 24. Este país, respondieron los israelitas, está habitado por hombres poderosos. Mientras lo ocupen, nosotros no entraremos en él. Si salen, nosotros tomaremos posesión de él. 25. Presentaos a la puerta de la villa, dijeron los hombres que temían al Señor y que estaban favorecidos por sus gracias: no bien hayáis entrado, seréis vencedores. Poned vuestra confianza en Dios, si sois fieles. 26. ¡Oh Moisés!, dijo el pueblo, no entraremos mientras no haya salido el pueblo que la habita. Ve con tu Dios y combatid ambos. Nosotros permaneceremos aquí. 27. Señor, exclamó Moisés, solo tengo poder sobre mí y sobre mi hermano; pronuncia sobre nosotros y este pueblo de impíos. 28. Entonces el Señor dijo: Esta tierra les estará prohibida durante cuarenta años. Andarán errantes por el desierto, y tú cesa de atormentarte a causa de este pueblo de impíos”. Moiffat **Al-Kharat**, *El Corán*. Arganda del Rey (Madrid), Editorial EDIMAT Libros, S. A., 2007, p.83-84.

⁷⁵ **Document 5:** President Sadat's plan to visit Israel solicited this speech by Israeli Prime Minister Menachem Begin (November 11, 1977), who had succeeded Prime Minister Rabin after a surprise election victory. In: **The Camp David Accords after Twenty-Five Years. “Twenty-Five Documents After Twenty-Five Years”**. Source on line: http://www.jimmycarterlibrary.gov/documents/campdavid25/campdavid25_documents.phtml Authorized website of Jimmy Carter’s Presidency.

⁷⁶ **USCCB**, *The New American Bible*. Translated by Members of the Catholic Biblical Association of America. Encino (California), Benziger Editor, 1970, p. 21.



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As it has been shown, our level of accommodation -the ‘differential’ in our ‘integral’- has been reduced to an explanation/quantification as a one-variable function, *culture*, and specifically *religion*, the deepest and most radical component of culture. ‘So, is it that, in the beginning of the XXI century, religion still has something to teach us?’ It may not be to believe in its ‘object’, God, but to believe in its ‘subject’, religion itself, for there are still today human beings and peoples that live in observance of its laws.

⁷⁷ Source on line: <http://www.bible.ca/archeology/bible-archeology-exodus-kadesh-barnea-southern-border-judah-territory-river-of-egypt-wadi-el-arish-tharu-rhinocolu.htm> Website of biblical archaeology and geography.

⁷⁸ Argument on the importance of the Biblical allotment of land to this negotiation has been verified in an anonymous meeting with Mr. X (high representative of the Jewish religious community in Belgium) on December 13, 2010.

CONCLUSION: THE LOGIC OF THE PAST, A LESSON FOR THE FUTURE

Once our case, the *First Camp David*, has been fully analysed, **only one question remains: ‘Is the effort of this minute analysis a contribution, or is it just an intellectual ‘divertimento’?’** To answer this question we have to go back to the reflection on history that was done in the introduction, where the argument was that the only possibility to go on building History is through a profound understanding of the reasons leading to a certain *agreement*, but not to a different one, in the course of an international negotiation –after all, History is just the history of the disagreements and agreements attained by mankind throughout the ages-.

Thus, the humble contribution of this investigation will be to highlight the role of culture, from the angle of beliefs -not only religious but of the type ‘*I believe X, and not Y*’ of each negotiator. Culture, the paramount transmitter of beliefs, forms us in an unyielding manner. Let’s look again at the definition of *culture* in the *New Encyclopædia Britannica*: “Culture, the integrate pattern of human Knowledge, belief and behaviour. Culture thus defined consists of language, ideas, beliefs, customs, taboos, codes, institutions, tools, techniques, works of art, rituals, ceremonies and other related components; and the development of culture depends upon man’s capacity to learn and to transmit knowledge to succeeding generations. (1990, Vol.3, p. 784)”⁷⁹ Nevertheless, to say that the culture/beliefs present in an international negotiation is the cornerstone to prepare and resolve it reaching a plausible and possible *agreement*, is to recognize that negotiation is a science in itself, as it requires us to accurately study all the pieces involved, as we have seen along this work, but it is also an art, demanding of a ‘*savoir faire*’ that is not related to *deduction* from tangible knowledge, but to *abduction* from inductive knowledge. As R. Lewicki, Bruce Barry and David Saunders say: “The notion that negotiation is both art and science is especially valid at the cross-cultural or international level. The science of

⁷⁹ Quoted by Winfried Lang, “A Professional’s View”. In: *Culture and Negotiation. The Resolution of Water Disputes*, by Guy Oliver Faure & Jeffrey Z. Rubin (eds.). Newbury Park (California), SAGE Publications, Inc., 1993, p. 38.

negotiation provides research evidence to support broads trends that often, but not always, occur during the negotiation. The art of negotiation is deciding which strategy to apply when and choosing which models and perspectives to apply to increase cross-.cultural understanding. This is especially challenging because cross-cultural and international negotiations add a level of complexity significantly greater tan within-culture negotiations.⁸⁰

A deep knowledge of the cultures present in a negotiation is a big vantage point to accomplish it, because its success or its failure are not to obtain what was initially desired -or not-, but to obtain –or not- the best result that the pieces in this particular game can provide. Aiming at what these pieces can provide, and not at our desires, is more realistic and scientific, and also less frustrating; it is necessary not to dismiss a single one of the variables involved in the game, including the least visible –but more present- one, culture/beliefs; this is the decisive variable, and, as sugar in the coffee, you don't see it, but it is there.

In this same sense, the main thing of this work is not precisely whether or not it reached the desired purpose, but whether the reflections presented open the way to future thinking, open the gates to future history. The ultimate purpose of this paper is to open a door to the scrutiny of those minds which are passionate about negotiation. Our last question, dedicated to all those who read this far, is:

AND YOU, what do you think-believe??

⁸⁰ R. Lewicki, Bruce Barry & David Saunders, *opus cit.*, p. 443.

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Document 1 and **Document 2**: These letters from President Jimmy Carter to President Anwar Sadat of Egypt (February 14, 1977) and Prime Minister Yitzhak Rabin of Israel (February 14, 1977) were written during the first month of President Carter's administration. They indicate President Carter's early personal commitment to the Middle East peace process as well as his eagerness to meet with both Sadat and Rabin. **(1) Declassified on October 3, 1997. (2) Declassified on December 11, 1998.**

Document 3: This letter (June 28, 1977) from nine United States Senators represented the support that President Carter was to have in his quest for Middle East peace.

Document 4: There were to be many obstacles to Middle East peace, and President Carter appealed to President Sadat for his support in this letter (October 21, 1977). One month later President Sadat visited Israel for the first time. **Declassified on July 14, 1997.**

Document 5: President Sadat's plan to visit Israel solicited this speech by Israeli Prime Minister Menachem Begin (November 11, 1977), who had succeeded Prime Minister Rabin after a surprise election victory.

[Document 6:](#) This President Sadat letter to President Carter (April 24, 1978) recognized the international respect that was accorded to President Carter's success in negotiating the Panama Canal treaties. President Sadat also emphasized Israeli activities and negotiating positions that discouraged support of other Arab nations for the peace process. **Declassified on June 19, 2002.**

[Document 7:](#) One week later, as President Carter prepared to meet with Prime Minister Begin, National Security Adviser Zbigniew Brzezinski asserted (May 1, 1978) that a renewed commitment to Israeli security should be coupled with an appeal for Begin recognition of President Sadat's requirements. **Declassified on October 20, 1997.**

[Document 8](#) and [Document 9:](#) On August 3, 1978, President Carter wrote private letters to President Sadat and Prime Minister Begin to be delivered by Secretary of State Cyrus Vance. The letters proposed a meeting of Carter, Sadat, and Begin at a time and location to be determined. **Both declassified on July 14, 1997.**

[Document 10:](#) President Carter's schedule for September 5, 1978, records the arrival at Camp David of First Lady Rosalynn Carter, President Sadat, and Prime Minister Begin.

[Document 11:](#) Ten days later (September 15, 1978) President Carter sent this message to Prime Minister Begin and President Sadat to suggest an honorable and respectable closure to what then appeared to be a failed peace effort.

[Document 12:](#) This is President Carter's draft of what became the "Framework for the Conclusion of a Peace Treaty Between Egypt and Israel."

[Document 13:](#) President Carter's notes indicate the difficulty of the last few hours of negotiations at Camp David.

[Document 14:](#) President Carter's schedule for September 17, 1978, records the hectic activities that culminated in a signing ceremony in the East Room of the White House late on a Sunday evening.

Document 15: The next day (September 18, 1978) President Carter accepted the congratulations of former National Security Adviser and Secretary of State Henry Kissinger.

Document 16: On Sunday, September 17, 1978, cellist Mstislav Rostropovich had been hosted by First Lady Rosalynn Carter at a White House concert as Carter, Begin, and Sadat wrapped up their Camp David discussions.

Document 17: One month later Prime Minister Begin and President Sadat were awarded the Nobel Peace Prize. Both President Sadat and National Security Adviser Brzezinski believed that President Carter should have been included in the award, an honor that President Carter was eventually accorded in December, 2002.

Document 18: As this memo (November 21, 1978) from Brzezinski to the President suggests, tough negotiations continued after the Camp David Accords until March, 1979. **Declassified on October 20, 1997.**

Document 19: On March 7, 1979, the President and Mrs. Carter departed for Egypt and Israel to once again bring the President's personal force to bear on the post-Camp David negotiations of an Egyptian-Israeli peace treaty.

Document 20: This is the President's schedule on March 13, 1979, the day on which he finally nailed down a peace treaty agreement.

Document 21: The President and First Lady returned to Andrews Air Force Base shortly after midnight on March 14, 1979, to be welcomed back to the United States by an enthusiastic crowd of approximately one thousand people.

Document 22: March 26, 1979, featured the signing ceremony for the Treaty of Peace Between the Arab Republic of Egypt and the State of Israel in the afternoon on the North Lawn of the White House, followed that evening by a State Dinner on the South Lawn of the White House.

Document 23: President Carter's handwritten editing of his statement delivered at the signing ceremony demonstrates his attention to detail even to the last moment of the peace process.

Document 24 (August 20, 1980) and **Document 25** (September 3, 1980): Despite the success of the Egyptian-Israeli Peace Treaty in preserving peace between those two nations, the Middle East continued to be a volatile region throughout the Carter's Administration and to the present.

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Anonymous meeting with Mr. X (high representative of the Jewish religious community in Belgium) on December 13, 2010.

