

STRATEGIC NEGOTIATIONS IN THE PROCESS OF THE EU ENLARGEMENT: A GAME-THEORETICAL APPLICATION TO THE AGRICULTURAL DOSSIER

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Abstract: This material attempts to predict the results of negotiations in the process of the EU enlargement. The analysis is to shed light on the underlying determinants of possible outcomes and to suggest with anticipation improved ways of conduct. The interaction between nation-states is modeled in classes of games or strategic structures of interaction on the basis that the incentives of each party are revealed by their behavioral stance. The findings present a detailed analysis of bargaining power and offer predicted solutions to negotiations for the cases of the two candidate countries Poland and Romania considered in the application. The model's predictions closely follow the results of negotiations in every significant detail.

1. Introduction

The scope of negotiations on the accession of the Central and Eastern European Countries (CEECs) into the European Union (EU) mostly embedded in the 31 chapters of *acquis* extends beyond the political decision of enlargement. Evidence of official statements and present records of results show that the main concern of both sides actually resides in the terms upon which negotiations are concluded.

The topic of beneficial enlargement of an integration structure is theoretically exposed to a large variety of arguments. The conventional analysis represented by the theory of economic integration helps in explaining the rationale underlying negotiations set in such a context, but leaves aside the strategic considerations inherently associated with that process. As the way negotiations are structured and the inherent conflicting nature of dossiers like "agriculture" eloquently shows the analysis of the process of strategic interaction proves

essential in understanding the economic terms on which the integration negotiations proceed and conclude. One of the objectives of this study is thus to define and justify these variables as determinants of negotiations in the accession process.

The agricultural dossier of the EU enlargement suits particularly well in this picture because of the diversified nature of its conflicting topics. A first hint is inferred from various nuances of views regarding its importance: the negotiations over agriculture has been described as a "political landmine", implying "large conflicts of interest" (Gacs and Wyzan), but nevertheless a "win-win project", that, if successful, will leave "no losers by the wayside" (Fischler).

The latter consideration, which aptly belongs to a former EU Commissioner for agriculture, encapsulates the rationale for an analysis of the strategic aspects of negotiations: each party aspires to a winning position in rather improbable terms of what success may be taken for. Because the interplay of interests is precisely based on

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these different representations of the terms in which negotiations are to be concluded, the analysis proposed by this study is to shed light on the underlying determinants of possible outcomes and to suggest with anticipation improved ways of conduct.

The interaction between nation-states is modeled in classes of games or strategic structures of interaction on the basis that the incentives of each party are revealed by their behavioral stance, while their negotiating agenda is either explicitly or implicitly formulated in official documents, historical contexts or publicly voiced statements. It is this attempt, which makes the game-theoretical construct necessary because both behavior and negotiations are predominantly based in the integration process on the interplay of expectations. Indeed, a foray into the government's behavior given the challenges of integrating countries with very different economic potential will try to highlight possible strategic policy interrogations.

As the CEECS negotiated separately their accession, a choice had to be made as to the most appropriate case(s) to consider. The option was to include an application of the model on Poland and Romania, the largest agricultural countries in CEECS according to data on agricultural land and the contribution of agriculture to GDP. The initial presumption that the cases of both Poland and Romania would provide adequate inputs for the analysis proved right. The model's predictions closely follow the results of negotiations in every significant detail. Moreover, the overview tableau of possible solutions helps assess better the gains and losses from negotiations *given the interplay of interests* and so makes the methodological contrast with conventional approaches to integration more visible.

The subject of strategic negotiations, along with a presentation of methodology is introduced in Section 2. Despite the major achievements in the economic research, the theme proposed here still finds at the junction of conventional with innovative approaches to the study of economic interaction when several countries integrate. The strategic analysis of negotiations addresses first the theoretical framework in which to build a model of bilateral negotiations; then, the model is used to test and predict the possible outcomes of negotiation on specific issues in general, and specifically for the purpose of this study in relation to negotiations on agriculture. Resemblance with other classes of interactions, e.g. debt rescheduling, enforcement of international agreements, and security aspects, indicates the option of considering 2x2 games in an empirical context. Section 3 presents this study's findings in two parts: the former analyzes bargaining power and the latter presents the solutions to negotiations. The arguments are elaborated against the background of the interaction pattern of the EU enlargement process and the issue of agricultural negotiations, whose conclusion became effective also for the last two candidate countries Bulgaria and Romania in June 2004. Section 4 on conclusions ends this study and suggests implications for further application of games of strategy in negotiations.

2. Overview of literature and research methodology

The economic factor is by no means a predominant explanation of integration, although one should consider it more realistically diffused into a multiple-level interaction among negotiating countries. A

comprehensive literature surveyed by Reza suggests that the states' behavior is determined by a three-layered system of basic constraints embodying elements of independence, dependence, and interdependence (44), which eventually shed light on the available and desirable courses of actions.

Conventionally, the formation of policy preferences has been explained in terms of domestic the "independence" level or international the "dependence" level constraints or both. The work of several authors (e.g., Schelling; Mo; Putnam; Helpman) models bargaining as domestic and international games that are played simultaneously, and shows that the bargaining outcome is resilient on the effective way a decision is reached in the first place.

According to several studies (e.g., Patterson; Pahre and Papayoanou) this approach is inconclusive. What they suggest is that negotiations rather encompass simultaneous effects on state behavior of a third level of interactive decisions as well. As proposed by Lehman, to make this conjecture explicit amounts to value the relative power of negotiating partners. The concept is suggestive of the supplementary constraints impeding choice selection, beyond the commonly described dichotomy of international and national levels of analysis.

This search for robust results induced a good strand of applied research (e.g., Aggarwal and Allan; Lenway and Murtha; Patterson L.A.; McDonald) to develop the two-level framework into variants of three- and four-level games with the intent to refine the strategic analysis. What eventually emerges from these last studies consists of varied solutions to define constraints, which poses "a task of elimination, which can only be

accomplished by an examination of the cases" (Conybeare 53). A precise interpretation is thus subsequently sought for at three presumed constraining levels of analysis. The debate reveals the problem of representation of constraints at each level.

2.1 The international level of economic dependence

The concept of power conveys the message on the constrained resources a nation has in the conventional sense that more power means better chances to arrive at the preferred outcome. Serdar emphasizes two main approaches to power: power by which states pursue and control others' behavior, and capacity stemming from their capabilities (2). The distinction is suggestive for the analytical procedures to measure power: the hegemonic context depicted by the former case is revealed by various indicators of power asymmetry, while the latter indicates a more laborious process to influence decisions in international relations.

In general, approaches to asymmetry give a country's size a subjective predictive value depending on the particular interaction. The underlying rationale offered by Lindert assumes that a country is "small" if it is likely to be more dependent on a particular trade relationship with its partner country, viz. it trades exports and imports with low price elasticity of demand (191). Conybeare exemplifies this kind of economic warfare in his model of trade war. His presumption correspondingly asserts that "as the disparity in size increases, the ability of the large country to extract gains from the small or hurt it with retaliation increases; the ability of the smaller country to gain from a tariff or hurt the large country by retaliation diminishes" (26); the conflict engenders a mutual loss if both countries are either large or small (27-28).

The accession process makes the enlargement negotiations a particular game of interaction in which the degree of dependence rests on the power deduced from the functioning of the future decision-making mechanism. In this sense, a member state's or candidate country's power is defined as its capacity to influence the outcome of the decision-making process within the enlarged EU.

Several studies (e.g. Bobay 14; Laruelle and Widgren 3; Baldwin 78) support the opinion that the number of votes a country has does not measure alone its power. Estimates of integrating countries' decisional capacity are usually argued to depend on the probability of coalition formation (Algaba et al. 15; Laruelle and Widgren 3). This literature proposes two standard assumptions on a country's capacity to exercise its power. Under the first assumption, all coalitions have an equal

In spite of their different mathematical constructs, both indices evaluate a country's vote as pivotal when the addition of its vote to a particular coalition switches that coalition from losing to winning (Algaba et al. 3; Baldwin 76). A winning coalition is defined as that which can make a decision without the vote of the remaining players (Laruelle and Widgrén 2). They prove useful in the sense that they measure power as the relative number of times a country is 'pivotal', i.e. changes a losing coalition into a winning coalition. An index of 0.020, for instance, would indicate that the probability of influencing the result of voting is 2 per cent.

The two alternative approaches are likely to give a first assessment of the impact of the EU enlargement on power. Table 1 below summarizes the findings from literature and discriminates among several types of decisional power.

Table 1. Estimations of relative decisional power within the enlarged EU-27 Council

Type of decisional power	Countries (Voting rights)	Range of Banzhaf indices	Range of Shapley-Shubik indices
Strong	Germany (29), France (29), United Kingdom (29), Italy (29)	I: 0.0778 II: 0.0665	I: 0.0871-0.0870 II: 0.0837-0.0836
Moderately strong	Spain (27), Poland (27)	I: 0.0742 II: 0.0631	I: 0.0799 II: 0.0767
Moderately weak	Romania (14), Netherlands (13), Greece (12), Czech R. (12), Belgium (12), Hungary (12), Portugal (12), Sweden (10), Bulgaria (10), Austria (10), Slovakia (7), Denmark (7), Finland (7), Ireland (7), Lithuania (7)	I: 0.0426-0.0218 II: 0.0407-0.0263	I: 0.0399-0.0196 II: 0.0394-0.0208
Weak	Latvia (4), Slovenia (4), Estonia (4), Cyprus (4), Luxembourg (4), Malta (3)	I: 0.0125-0.0094 II: 0.0198-0.0177	I: 0.0110-0.0082 II: 0.0131-0.0106

Source: Algaba et al. for indices; *Treaty of Nice* for allocation of voting rights in the Council.

probability of formation. Under the second assumption all the coalitions of a given size have the same probability of forming. The first assumption leads to the non-normalized Banzhaf index, while the second one leads to the Shapley-Shubik index.

Table 1 presents two estimates for indices: 'I' stands for the first decision rule the weighted triple majority corresponding to votes (QMT), countries (SMT), and population; 'II' stands for the second decision rule - the rule I except for a

qualified majority of 2/3 of the countries. The computations show a remarkably similarity between the two indices, but sufficiently discriminate among groups of countries as to their relative power.

The analysis however has not the accuracy to indicate that a 'moderate' position could be meaningfully considered apart from the larger group, which it belongs to, either 'strong' or 'weak'. Nevertheless, the results confirm the dichotomy between 'large' and 'small' Member States widely accepted in the literature on voting power indices as suggested by Plechanovova, which without exceptions parallel those countries in the table with 'strong' and 'moderately strong' power, and 'moderately weak' and 'weak' power, respectively.

At the same time, as the EU acts as a bloc and demonstrates the capacity to structure the negotiations, it normally plays 'strong'. The indices are instead particularly indicative of each candidate countries' influence. Given the current weighted voting system, Poland is the only country of the CEECS group which can play 'strong' at the international level, while other countries, some more economically advanced than others, are only able to play 'weak'.

The analytical value of this concept of power should be precisely understood to the extent this measure of power tells, "how powerful a country is likely to be on a *randomly* chosen issue" (Baldwin 78; italics added). Possible coalitions are likely to form on specific negotiating issues and national preferences could thus reveal a mixture of interests in various instances. The other two levels of analysis are thus required to overcome this kind of limit the indices display.

2.2 The national level of economic independence

There is commonly acknowledged that nation-states embody country-specific governance capabilities (Lenway and Murtha 513), which bear on the strategic interaction a highly influential mixture of domestic politics. The attempt to reveal the mechanism in greater detail nonetheless remains subject to analytical approaches with varying degree of explanatory power. Schelling's and Putnam's works advance the conjecture that, given sufficiently great domestic constraints, a country can have a bargaining advantage in international negotiations. Mo attempts to model that predicted behavior and his results show that the precise outcome depends on the institutional setting whereby domestic political power is distributed "in the medium range". However elusive this result may sound, it nonetheless underscores that a negotiating country has to make in fact more concessions under greater domestic constraints.

Miller strengthens the case of failure to avoid international conflict due to domestic problems when he finds that democratic and autocratic states indeed behave differently: the latter appear more prone to escalate the conflict (399). His response, as well as the Conybeare's lay emphasis on political vulnerabilities of leaders, such as economic recessions, levels of domestic, cyclical decline of specific industries, which discount the benefits of future cooperation, and hence allow for protectionism.

Recent research in institutional economics is an appropriate field, which economists turn to in order to comprehend this diversity of factors. In a comprehensive study, Easterly and Levine make a strong

case for institutions, understood in the form of diverse instances like political stability, property rights, legal systems, patterns of land tenure and so on. Their findings explain cross-country differences in GDP per capita once one controls for institutions. In their words, "institutional quality seems to be a sufficient statistic for accounting for economic development" (33). As easily can be inferred from these descriptions, the institutional context is eventually made recourse to in order to gather convergent, even if disparate, explanations for domestic policy influences.

The widely acceptance of the quality of institutional change for positive economic outcomes has been lately reflected in the proliferation of cross-country indices measuring various aspects of governance. Studies like those of Kushnirski, Easterly and Levine, Weder make a positive correlation between credible and stable institutions, on the one hand, and high levels of governance or institutional indicators, on the other hand.

Kaufmann et al. construct probably the most laborious index of governance broadly defined as "the traditions and institutions by which authority in a country is exercised" (*Governance matters*). Specifically, the methodology aggregates estimates of three aspects of governance: the process by which those in authority are selected and replaced; the capacity of the state to implement sound policies; and the respect of citizens and the state for the rules which govern their interactions.

The authors' research draws on 17 separate sources of subjective data on perceptions regarding the quality of governance in different countries, which include international organizations, political and business risk rating agencies, think tanks, and non-governmental organizations

(*Governance matters II*). Six aggregate governance indicators - "Voice and Accountability", "Political Stability", "Government Effectiveness", "Regulatory Quality", "Rule of Law", and "Control of Corruption" are then computed within a range from 2.5 to 2.5, such that higher values correspond to more credible and more stable institutions.

As the individual countries' indicators are methodologically transferable in aggregate ones, an aggregate index for the EU is computed as a weighted average of Member States' institutional indicators. For the present purpose, the national indicators are given weights corresponding to each member state's representation in the European Parliament. The choice is supported firstly by the faithful representation of this elective body of the national electorates. Due to the Parliament's ascending role over Commission, its composition is thought to reflect more appropriately the influence of the domestic politics of the Member States. Secondly, the discussions engendered by the enlargement as to the new composition of the Members of European Parliament (MEPS) convincingly show the growing importance of Parliament in the EU decision-making process. Yataganas considers the case indicative of a still persistent interference of national policies in European integration, which proliferates to the composition of the Commission as well (42, 24).

The aggregate indicator for the EU is computed as a weighted average of individual indicators, where the weights correspond to the share of each Member State in the EP. During enlargement negotiations (2001), Parliament's composition was as follows: Germany 99 (15.8%), UK, France and Italy 87 (13.9%), Spain 64 (10.2%), Netherlands 31 (5.0%),

Greece, Portugal and Belgium 25 (4%), Sweden 22 (3.5%), Austria 21 (3.4%), Denmark and Finland 16 (2.6%), Ireland 15 (2.4%), and Luxembourg 6 (1%) out of a total 626 MEPS (Yataganas 18). A synthetic table is presented below.

'moderately stable/credible' for both Poland and Romania because of their closer distance to the first tercile.

Table 2 Estimates of indices of institutional stability

Country/Partner	2000/01	1997/98
European Union	1.12	1.22
Bulgaria	0.2	-0.0
Czech Republic	0.54	0.68
Cyprus	0.95	1.07
Estonia	0.95	0.45
Hungary	0.81	0.87
Latvia	0.56	0.78
Lithuania	0.58	0.27
Malta	0.72	0.83
Norway	0.58	0.73
Denmark	-0.5	-0.15
Sweden	0.75	0.74
Slovenia	0.35	0.92

Source: Country estimates are calculated as simple average of the six aggregate governance indicators from Kaufmann, Kraay, and Zoido, *Governance matters II*, 2002.

A cautious note is required in interpreting data in Table 2 as well. First, the indicators are suggestive when applied to individual cases rather than comparing different national estimates. For example, a decrease of the EU indicator from 1.22 to 1.12 in the period under consideration indicates a loss in institutional stability, but the values are not statistically significant in contrast with other close estimates. Second, discrimination between broad categories does make a difference as regards the influence of domestic politics. According to Kaufmann et al., an acceptable classification would consist of top, middle and bottom terciles as measured against the -2.5 / +2.5 interval. That means that the parties considered by this study could be assigned the following institutional 'labels': 'stable'/'credible' for the EU and

2.3 The issue-area level of economic interdependence

Aggarwal and Allen suggest that it is reasonable to think of cases where overall power "may not always be fungible across issue-areas" (12). By consequence, the most preferred outcomes a large country would normally envisage might be seriously distorted by an apparently weak specific bargaining position. Trade negotiations, and particularly integration arrangements, have become increasingly multilateral. Large-numbers trade games increase the complexity of interaction and admittedly change the expectations about countries' behavior (Alesina and Spolaore 23; Conybeare 55).

Diverse explanations were proposed to understand power in interdependence. A

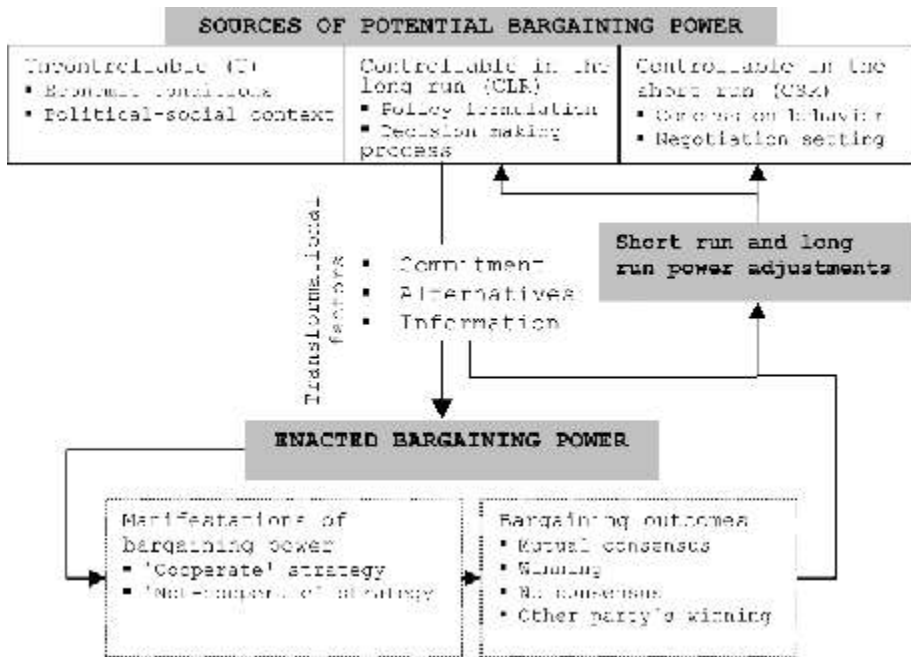
consistent approach to the topic offers the Leap and Grigsby's model, which distinguishes between power that is available (potential power) and power that parties actually use (enacted power) (205). It provides so an explanation for the process by which power is accumulated or, alternatively, dissipated. In their view, transformational factors account for the degree of the unused power and may take the form of: a particular party's strength of commitment to a bargaining relationship; the alternatives available to a party; and information available that has an impact on the bargaining relationship (205).

The general concept of the sources of potential power is constructed on the degree of control a negotiator organization or people may exert on the various elements of the negotiating environment. The extent these resources are exploited hinges on the

transformational factors a negotiator faces in the specific context. The innovation the model of Leap and Grigsby suggests is that disparate such factors proposed by the literature are thought to produce simultaneous effects on potential power and thus to provide a more accurate evaluation of the strength or weakness of bargaining power. An analytical depiction of the process appears in Figure 1 below.

A dynamic perspective is introduced when considering short run and long run adjustments of potential power. Bargaining provides a continuous opportunity for the players to learn about each other and to react in a way to strengthen their own positions. It is thus evolving an ongoing examination of the determinants of power, more realistically perceived than in *ex post* investigations.

Figure 1 A Theoretical Model of Bargaining Power in Strategic Negotiations



Adapted from Leap and Grigsby (209)

2.4 Method design

A strategic interaction modeled as a game consists of: relevant players; strategies; outcomes; and preferences for payoffs associated with each outcome. The players are the negotiating parties, i.e. the EU and each CEEC for the present purpose. The strategies represent the possible courses of actions, provided that the behavioral options perceived by the players may be plausibly reduced to cooperation ('C') or non-cooperation ('~ C') on a given issue.

A process of exposing the basic situations of interaction has been developed in the works of Aggarwal and Allen (AA), Conybeare (C), and Brams and Kilgour (BK). This study uses an adapted game model of strategic interaction for integration negotiations. A generic two-person, symmetric normal form game of strategic interaction is presented in Figure 2 below.

rules are hard to find, as they usually are acknowledged by some authors, but discarded by others. For example, cardinal scales of measurements are found more informative (Bacharach 21), but at the same time largely irrelevant for game theory applied to international relations (Snidal 46). A typically minimal level that could warrant a valid definition of the game structure is provided by ordinal measures of preferences. Utility scales illustrate a preference order for each player, in which the four possible outcomes are simply ranked from best (4) to worst (1).

The following assumptions are made about the relationships among each player's preference order for payoffs under the three situational variables exposed earlier. Arguments from the literature review shortly explain the choice and the approach, which is similarly suggested by the adopted models is indicated next. The corresponding

Figure 2. A generic game of strategic interaction

		Player B	
		Cooperate(C)	Not cooperate (~ C)
Player A	Cooperate (C)	Mutual consensus (MC) in issue area	B prevails (BP) in issue area
	Not cooperate (~ C)	A prevails (AP) in issue area	No consensus (NC) in issue area

Based on and adapted from Aggarwal and Allan 11; Brams and Kilgour 7.

Four possible outcomes are depicted in the figure above. From the point of view of actor row they are: CC (mutual consensus); ~ C ~ C (no consensus); C ~ C (other's player winning); and ~ CC (winning). The preference set specifies how good or bad each outcome is for each player. The way preferences are deduced is fundamental for finding the predicted conclusion of the negotiations in the form of one the four possible outcomes. General

structures of strategic interaction with ordinal measures of pay-offs are indicated further in Figure 3.

a. Institutional stability

a1: each player prefers mutual consensus to no consensus when institutionally stable (CC > ~ C ~ C) AA

a2: each player prefers no consensus to mutual consensus when institutionally unstable (~ C ~ C > CC) AA

- b. Overall power
 - b1: each player prefers no consensus to the other player's winning when power strong ($\sim C \sim C > C \sim C$) AA
 - b2: each players prefers the other player's winning to no consensus when power weak ($C \sim C > \sim C \sim C$) AA
- c. Issue-area bargaining power
 - c1: each player always prefers winning when issue-strong ($\sim CC$ is best) AA+BK
 - c2: each player prefers winning to no consensus or the other's playing winning when issue-weak ($\sim CC > \sim C \sim C$ or $C \sim C$) AA
- d. Interactive effect of overall power and issue-area bargaining power
 - d1: each player prefers winning to mutual consensus when power strong and issue-strong ($\sim CC > CC$) BK+C
 - d2: each player prefers the other player's winning to mutual consensus when power weak and issue-weak ($C \sim C > CC$) C

3. Negotiations on the agriculture dossier: bargaining power, representations and solutions of the games

The proposed model of strategic interaction applies to the issues specific of enlargement negotiations on agriculture. The EU and each of the CEEC exchange concessions and settle on various matters like production quotas, level of subsidies, and rural developmental funds. Data are gathered to illustrate one of the two facets of the bargaining position given certain levels of overall power, as well as of quality of the domestic politics environment: a partner may play 'strong' or 'weak' on a specific issue when it is institutionally either stable or unstable and when it enjoys 'strong' or 'weak' capabilities to influence overall decisions. The country's assessment of overall power and institutional stability follows the mentioned findings in the literature.

Figure 3. Deduced constrained preference order from Row's Perspective (for column, $\sim CC$ is replaced by $C \sim C$ and conversely)

	Institutional stability																	
	Stable	Unstable																
<i>Issue resources and overall power</i>																		
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The research design requires original data on each partner's capacity to play 'strong', when it favorably appropriates against its own value systems the conclusion of negotiations, or to play 'weak', when the enacted power makes the more preferred behavior difficult to carry out. The terms of reference for data collection are provided by the Leap and Grigsby's construct of bargaining power. Analysis aims at predicting the possible strategic options of the partners when the integration agreement frames the general objectives, but the negotiations on specific issues have not a predetermined settlement.

Two eastern countries experiences are observed in the application, in both cases the agriculture topic being of sensitive importance to the negotiators. The first case is that of Poland, one of the countries, which completed the negotiations in December 2003 and became a Member of the EU on May 1st, 2004. The second case is that of Romania.

A substantial part of the object of accession negotiations was initially presented in the 1995 White Paper (*Preparation of the Accession Countries*), a Commission document containing all-inclusive references to the legislation relevant to the internal market. The applicants were indicated here the regulations concerning the veterinary, plant health and animal nutrition fields and agricultural commodities subject to specific marketing standards. Another non-negotiable component of the *acquis* consists of institutional requirements referring to the establishment and functioning of the Common Market Organizations (CMOS), which are essential to the proper operation of the agricultural markets. Detailed legislative and institutional presentations are subjects of subsequent accession documentation such as Agenda 2000 and

annual EC's *Regular Reports* on each candidate country's progress towards accession.

The negotiations on the Common Agricultural Policy (CAP) mechanism however make the agriculture dossier highly controversial. The negotiable aspects construct a classical bargaining game built on exchanges of concessions, divergent arguments and situations of conflict. The reason is that CAP involves policy measures with important budgetary impact for both partners alike: for the EU, this financial envelope covers about half of the total budget; for the CEECS, it represents approx. 70% of the total value of their agricultural output.

3.1 Bargaining positions of negotiating parties

The baseline negotiating position for the EU included the following main elements:

- Direct payments: Direct income subsidies for farmers in candidate countries should be phased in over a 10-year period, starting at 25% of those paid in the existing Union in the first year of accession. In order to facilitate the appropriate adoption of the CAP mechanism, the CEECS were presented the option to choose between the standard direct payments system and a simplified approach for a limited period in the form of a decoupled area payment applied to the whole agricultural area.

- Production quotas and other supply management instruments: It has been stated that the quantitative reference levels should be determined on the basis of past performance, i.e. to reflect actual production in a recent year, 1995-1999. The Commission provided detailed proposals on production in all the sectors with a market organization, relevant for the candidate countries.

- Rural development: The candidate countries have been already presented the opportunity to gain experience in the design and implementation of a co-financed policy through the pre-accession instrument SAPARD. Supplementary accompanying measures will be implemented upon accession.

- Risk of deflection of trade: At the request of Poland, the Czech Republic and Slovakia for introduction of an import safeguard clause, the EU favored transitional measures to be decided before accession under the appropriate procedure.

- A scheme of flat-rate payments: A group of self-subsistence farms should be assisted over a definite period.

The Commission's negotiating position is presented in Appendix, Tables A1 and A2.

The Poland's baseline negotiating position consisted in (*Government*):

- Introduction of necessary protective measures during the first few years of the membership, if trade between Poland and one or several EU Member States leads to a justified threat of serious disturbances in the Polish agricultural market.

- Direct payments: In its reaction to the EU proposal of January 2002, Poland exposed a more relaxed position and accepted a gradual introduction of the financial support over an only three-year transitional period (2004 - 2006). The initial installment of 25% of the EU level was considered "decisively too low" (Gwozdz 38).

- Production quotas: The most important negotiation problems were referred to the production of milk, white sugar and isoglucose, potato starch, dried fodder and raw tobacco. Poland expected a flexible approach as regards the reference crop on justification pertaining to the potentially superior land productivity, as well as maintaining of jobs and income

sources in the agricultural sector.

- Temporary authorizations for establishments processing and placing on the domestic market raw milk and milk based products, as well as meat and meat products for which production has not been fully compliant with all EU veterinary requirements.

- Establishment of a new common market organization in table potatoes and for expansion of the list of agricultural products covered by the EU financial support, such as herbs.

- Temporary financial support (3 years from the date of accession) for expenses borne in connection with the establishment of the Integrated Administration and Control System (IACS) up to 50% of the total cost of the System.

Romania put forward the following baseline negotiating position (*Romania's Position*):

- Transitional periods of 5 years from the date of accession to adopt safeguard measures for the import of agricultural products from one or more Member States.

- Transitional periods for complying with various Community regulations regarding veterinary and phytosanitary issues in the production for wine, pig, meat processing, and milk.

- Direct payments: the adoption of the period 1985/9 - 1990/1 to determine the base area, and the reference period 1990 - 1994 for rice

3.2 Assessment of bargaining power

The EU plays strong on issue bargaining power. The Commission proposals make clear that the candidate countries will be treated unequally for at least a decade after membership. It will continue to support the rural habitat, but is not willing to cause imbalances in candidate countries by huge payments. It emphasizes

the functions of agriculture in addition to food production such as preserving the cultural landscape and contributing to the economic and social viability of rural areas. It has succeeded in maintaining the principal objectives of negotiations:

- Progressive introduction of payments to farmers.
- Reference quota levels specific to the most recent period.

Poland is determined to defend the interests of its agriculture but nevertheless is eager to find appropriate solutions within the general context of enlargement negotiations. Poland plays weak on issue bargaining power although provided enough time constraints for the EU it could have adopted a strong position. It was quick to compromise on some issues (e.g. the transitory period for IACS or the sale of agricultural land plots), and it has not succeeded in persuading its partner on some issues deemed essential by Polish negotiators:

- Equal competitive conditions.
- More favorable recent yield estimates.
- Potato market organization.

Romania played the negotiating game until June 2004 when the Chapter 7 was provisionally closed, half a year earlier than available estimates indicated. There are arguments that a weak issue bargaining power accommodates at best its position: a fragile political support, sparse informational context, heavy reliance on food consumption, and mostly a poorly developed state of agriculture, economically and institutionally, all converged to this conclusion. Romania either did not formulate demands, which were finally claimed as "successes" of negotiations such as

- Increased funds for rural development.

- Topping-up of direct payments.

Or extracted no result from negotiation on important initial demands:

- Application of safeguard measures.
- More favorable yield estimates.

3.3 Assessment of general power and institutional stability

This study adopts the Nice Treaty results on decisional power within the Council alongside corresponding game-theoretical assessments as an adequate guide to general power. Thus, strong general power is the attribute of the EU and Poland, while a weak position describes Romania. This study accepts the results of specific research on institutional capacity in order to hypothesize on the stability of the partners' domestic coalitions. The convergence of results admits stable regimes for the parties concerned, i.e. EU, Poland, and Romania.

3.4 Representations and solutions of the games

The objective of the strategic analysis of negotiations is to predict the expected outcome in the generic form of "cooperative" and "non-cooperative" strategies; the practical meaning refers to "high/low concessions" when describing the strategies' payoffs. A cooperative approach to negotiations implies "high concessions" while a non-cooperative approach yields "low concessions".

The discussion centers on the final terms agreed to by the negotiators. These terms are summarized under the main headings in Appendix, Tables A1 and A2.

The constraints, which modeled Poland's behavior during negotiation, determine two possible situations for this candidate as depicted in Figure 4 below. As the EU always plays a PD game, the

Figure 4. The EU-Poland strategic game: Representation

<i>Issue resources and overall power (Player)</i>			Institutional stability
			<i>Stable</i>
Issue weak Power strong (Poland)		Stag Hunt 4,4 1,3 3,1 2,2	Prisoner's Dilemma 3,3 1,4 4,1 2,2
Issue strong & power strong (European Union)			Prisoner's Dilemma 3,3 1,4 4,1 2,2

solutions of negotiations are represented in two strategic structures, (1) and (2) in Figure 5.

A Polish interpretation of the results of negotiations was that "Poland did not succeed in reaching its negotiation target" (*Costs and Benefits* 109). The Appendix nevertheless shows a mixed picture of concessions and in some instances, e.g. diary production and potato starch, there are significant differences in favor of Poland. The solutions presented above suggest that the two partners initially found no consensus in issue area only to progressively reach for mutual agreement.

In situation (1), which is a symmetric PD game, both countries have the dominant strategy of choosing a non-cooperative approach ('~ C'). The partners arrive here at no consensus '~ C ~ C' - in negotiations. In situation (2), it is only the EU which has a dominant strategy playing '~ C' and the game reaches the same equilibrium

' ~ C ~ C' because Poland would predictably also choose not to cooperate.

The interesting feature of this strategic interaction is the prediction of the same equilibrium *and* the possibility to reach a better outcome for each partner in both situations if they cooperate. There is a mutual benefit the negotiating partners extract if they agree on high concessions on their agenda.

As for Romania, the negotiations proceeded at normal pace and finished sooner than expected in June 2004. The EU does not change its behavior during negotiations and again plays a PD game. Romania is constrained to a Leader game. The possible outcomes are proposed according to the Figures 6 and 7 below.

The EU alone follows a dominant strategy, which expectedly is not to cooperate. Romania would find in a cooperative approach the best outcome given the circumstances. As a result, the

Figure 5. The EU-Poland strategic game: Solutions

	European Union	
	C	~ C
C Poland	3,3	1,4
~ C	4,1	2,2

(1)

	European Union	
	C	~ C
C Poland	4,3	1,4
~ C	3,1	2,2

(2)

analysis leads to an equilibrium in which Romania 'cooperates' and agrees on high concessions, while the EU 'stands firm' and maintains low concessions.

did Poland and EU find ways to cooperate?

In the case of Romania, things appear most simply to explain. Comparison between the initial demands and the results

Figure 6. The EU-Romania strategic game: Representation

<i>Issue resources and overall power (Player)</i>	Institutional stability	
	<i>Stable</i>	
Issue strong & power strong (European Union)	Prisoner's Dilemma	
	3,3	1,4
	4,1	2,2
Issue weak & power weak (Romania)	Leader	
	2,2	3,4
	4,3	1,1

Figure 7. The EU-Romania strategic game: Solution

	European Union	
	C	~ C
C Romania	2,3	3,4
~ C	4,1	1,2

The strategic situation does not invite the parties to find ways to improve their gains: for Romania, it would be hardly imaginable to attempt to arrive at '~ CC', its next better payoff, because the EU would have only to reach its worst outcome; for the EU, the equilibrium rewards the best payoff of the game.

3.5 Discussion

The analysis reveals several pertinent questions to elaborate on. A first set refers to the accuracy of results: Do the analytical representations of real situations reflect what in fact happened during negotiations? How

of negotiations clearly indicate a maximum degree of lenience on behalf of this candidate. Only for crops and beef, the results do not depart much from the request; for sugar, tobacco, milk, and sheep meat the negotiated quota are about half the original demand, whereas several other areas (e.g. rice, potato starch, fruit and vegetables, fibers, and honey) received no mentions. This latter treatment is also specific for some related issues, either financial (e.g. inclusion of the Romanian varieties of flax and hemp for fibre and registration of national tobacco varieties in view of being included in the scheme of production premiums granted to producers) or non-financial (e.g. a transition period of 3 years in order to implement at national level the policy of non-vaccination against classic swine fever).

The image is completed with the observation that in other several areas for which agreements were eventually agreed e.g. seeds, hops, nuts, and partially for milk and beef - Romania stated that it would specify later the statistics required to

consider the appropriate market support and was thus not even in position to make a proposal. That attitude is explained by the fact that at the time the Position Paper had been submitted, the first General Agricultural Census after 1948 was carrying out and no reliable data were by consequence available for the purpose of negotiations.

The EU-Romania game however raises the intriguingly possible occurrence of the event 'CC', because one may ask why could Romania value it less preferably than 'C~C'? One has to recall here the argument that a double weakened position (overall and issue area power) engenders the lowest level of compromise, which is well manifest in the final results of negotiations. The economic meaning of this behavior is thus understood best in terms of constrained limited ability to ask for and expect concessions from the negotiating partner.

As for the EU-Poland game, both parties began negotiations on severely intractable positions which are suggestive for the initial '~C~C' equilibrium. Some basic principles of negotiations were considered 'leave it or take it' issues. Poland stated for example that "the obligations [in respect of direct payments] might be effective only if the supportive measures for agriculture - identical to those enjoyed by farmers in the EU Member States - are ensured" (*Poland's Reply* 6, 30). In its turn, the EU stressed that no provision should be made for safeguard measures against imports from EU Member States and decided "to address the risk of deflection of trade due to Poland's accession, where necessary, through transitional measures ... before accession under the appropriate procedure" (*Accession Negotiations Jan.* 86). In fact, both parties eventually indulged in the other's arguments and thus found a consensual approach.

The way to a cooperative outcome has been paved with significant concessions on behalf of both parties. Poland had to leave aside demands, which were initially put forth authoritatively. One important example refers to the establishment of a Common Market Organization for potatoes (*Poland's Reply* 52). The Polish team emphasized that the issue of establishing the CMO of Cotton Market was justified in the past by the enormous economic importance of this crop for Greek agricultural producers. They continued the argument and stressed that the market of edible potato similarly is a considerable market for Polish agriculture and Poland is one of the greatest potato producers in the world.

Other examples of Polish demands which did not meet the EU approval include: financial assistance from the EU to part-fund the employment and training of the additional personnel needed to implement and manage the EAGGF Guarantee payment system; inclusion of the varieties for fiber crops artemida, alba and wiko in the list of EC flax varieties; grant of export refunds in relation to the cereals used for production of Polish vodka exported to third countries.

As for the EU, it had to confront one major Polish request that the minimum requirements for the recognition of producer organizations should be a minimum number of 5 members and a minimum value of marketable production provided by the members of €100,000. The EU's first reaction was that "the application of such low thresholds in a large area as the whole territory of Poland would not be justified" (*Accession Negotiations Jan.* 94). The final agreement (Appendix, Table A1) observes the Polish position.

In another instance, the EU again proved conciliatory against a Polish innovatory proposal to complement direct

aid paid to farmers up to the total level of direct support he would have been entitled to receive in Poland prior to accession under a like national scheme. The EU conceded that Poland should be given that possibility on the ground that it had applied national direct payments to farmers before accession (*Accession Negotiations Apr. 89*). That case set a pattern and was followed during negotiations with Romania as well.

4. Conclusions

The conventional way of thinking about integration has produced undoubtedly remarkable results, if only one has to bring into discussion the topic of increased efficiency in a larger economic space. Even if several contrasting empirical findings were to be left aside, there is however the amounting evidence about non-traditional gains from integration which would make the topic increasingly complex to be satisfactorily treated with the usual analytical tools. Here is where the game-theoretical perspective could offer convincing insights on the way countries look for and are capable to get the most advantageous outcomes from integration negotiations.

The application to the agricultural dossier of the last EU enlargement seems particularly suited both to reveal the effectiveness of game theory to deal with problems of strategic interactions and to provide reliable predictions as regards the negotiation solutions. The results prove satisfactorily consistent with the conduct and results of the negotiations.

It is beyond doubt than any advantage this model exhibits is to be strengthened or weakened by further research. The work here shows that its application is more appropriately suited to cases of multiple-negotiable issues and largely interactive contexts involving 2

partners, which may or may not lead coalitions.

There are several promising venues to provide more insightful results in analyzing strategic negotiations. Some stem from the inherently limited scope of this study. That is the case, for example, with the institutional indices which this research makes reference to. It is evident that any coalition of *international* partners cannot be appropriately described that way. Besides, there is also the problem of providing a coherent *aggregate* explanation for coalition behavior. Perhaps, the economic analysis has yet to make recourse to more intakes from the original research in cooperative games and transpose them in meaningful descriptions.

A second example of investigation, which would naturally continue this study, refers to the issue of multiple strategies. There are reasons to think that the actual pursue of negotiations involve more than two strategic options. An argument at hand is that a 'middle' approach to concluding a deal is presumably not so rare an occurrence. Finding the right path to formalize the order of preference in these 2x3 games is seemingly another provoking research objective.

Finally, the issue of multiple levels of interactions enlarges further the research agenda. Although it seems convincing enough to limit the analysis to the three levels of dependence, independence, and interdependence it may also seems inciting to consider supplementary sources. For example, the independence level could be separated in domestic and international institutional contexts; or, more readily, the domestic area conceivably comprises areas of interaction at individual (e.g. personalities), group (e.g. social classes), and institutional level (e.g. governmental and non-governmental organizations).

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Appendix

Table A1. Negotiating agenda of the EU-Poland game

(1) Financial issues

Common Market Organizations	Negotiating issues	EU request	Poland request	Results of negotiations
Crops, oilseeds, protein crops	(i) establishment of base area	9,207,667 ha (9,217,667 ha)	9,248,000 ha (9,263,000 ha)	9,291,377 ha
	(ii) establishment of reference yield	2.96 t/ha	3.61 t/ha	3.00 t/ha
	(iii) establishment of eligibility of land for direct payments	December 31 2000	No request	
	(iv) establishment of durum wheat area	Fixed maximum areas		
Potato Starch	Establishment of production quota	90,546 to	260,000 to	144,985 to
Dried fodder	Establishment of National Guaranteed Quantities	0 to (dehydrated + sundried)	160,000 to	13,538 to
Sugar	(i) fixing of sugar production quotas A + B	1,665,017 = 1,590,533 + 74,484 to	1,866,000 = 1,650,000 + 216,000 to	1,674,495 = 1,590,533 + 83,961 to
	(ii) fixing of isoglucose quotas A + B	2,493 = 2,493 + 0.0 to	20,000 = 15,000 + 5,000 to (42,000 = 40,000 + 2,200)	6,232 = 6,232 + 0 to
Tobacco	Establishment of production quota	37,933 = Flue cured 22,000 Light air cured 12,633 Dark air cured 1,867 Fire cured 1,233	70,000 (55,000)	37,933
Milk	Milk quota scheme T = D + Sales	8,875,000 = 6,956,333 + 1,918,667 to	11,217,000 t (11,845,000) in 2003 up to 13,740,000 t in 2008 = 10,506,000 t	8,964,000 in 2003 up to 9,380,000 in 2008 = 8,500,000 in 2003 up to 8,916,000

Common Market Organizations	Negotiating issues	EU request	Poland request	Results of negotiations
Beef	(i) Additional payments (ii) Slaughter premium (iii) Special beef premium (iv) Suckler cow premium	27,393,275 Å adult: 2,034,309 calves: 1,200,625 857,700 503,682 – 10% = 453,314 (325,581)	(11,183,000) in 2003 up to 13,176,000 t in 2008 + 711,000 t (662,000) in 2003 down to 564,000 t in 2008 Not quantified 2,021,000 1,017,000 2,200,000 1,500,000 720,000	in 2008 + 464,000 in 2003 down to 464,000 in 2008 1,815,430 839,518 926,000 young bulls 325,581 335,880
Sheep meat	(i) Ewe premium (ii) Additional payments, global amounts	364,000 (335,880) 331,000 Å		

(2) Non-financial issues

Poland position	Negotiation result
Recognition of producer organizations should be a minimum number of 5 members and a minimum value of marketable production provided by the members of Å 100,000. Solution which would enable the present structure in respect of the raw materials for high wines production to be maintained in Poland after accession. Possibility of placing the inscription "Polish wine"/"Polskie wino owocowe" on the fruit wine labels to Polish wine producers, as well as for extending the list of spirit drinks subject to the protection in respect of their geographical origin and for protecting the trademark names of selected spirit drinks. Determination of the minimum raw tobacco production volume necessary to	A 3 year transitional arrangement to set criteria for the preliminary recognition of producer organizations in the fruit and vegetables sector at 5 producers and a minimum value of marketable production of Å100,000 Decision to classify Poland into a wine growing zone and obligation to register and classify the vine varieties was postponed until accession. Designations for alcoholic drinks (e.g. geographic, traditional) have been agreed for the requested varieties (Polish vodka, Polish Cherry, Herbal Vodka, Polish fruit wine, and Polish wine). A 5 year transitional arrangement to set the threshold for the recognition of a

recognize the producers' group at a suitably low level which would facilitate group establishment.	producer group in the tobacco sector at 1% of the guarantee threshold for all production regions in Poland.
Introduction of a modified system of milk production quota administration over a period of a few years after accession.	Distribution of quota between deliveries and direct sales will be reviewed on the basis of actual 2003 figures.
Possibility of initiating talks on the introduction of a modified system of milk production quota administration over a period of a few years after accession.	A transitional arrangement of one year for the allocation of milk quota to individual producers and consequently be exempted from the payment of additional levies in the first quota year.
Adoption of suckler cow premium system as it occurred in case of the last EU enlargement. The multi-purpose breed of cows to be recognised as suckler cow provided that they were served by a beef breed bull.	A 3 year transitional arrangement relating to which additional breeds are entitled to receive the suckle cow premium.

Source: Data collected from Costs and Benefits, Table 1, 109; and European Commission, Enlargement and Agriculture.

Table A2. Negotiating agenda of the EU-Romania game

(1) Financial issues

Common Market Organizations	Negotiating issues	EU request	Romania request	Results of negotiations
Crops, oilseeds, protein crops	(i) establishment of base area (ii) establishment of reference yield (iii) establishment of eligibility of land for direct payments (iv) establishment of durum wheat area	7,013,000 ha 2,650 to/ha	6,891,100 ha 3,087 to/ha.	7,012,666 ha 2,650 to/ha
Rice	(i) establishment of base area (ii) area payment based on national average yield		17,000 ha	
Potato Starch	Establishment of production quota		4,000 to	
Dried fodder	Establishment of National Guaranteed Quantities		500,000 to + 250,000 to otherwise dried and grounded (lucerne and clover)	
Sugar	(i) fixing of sugar production quotas (ii) fixing of isoglucose quotas	109,164 to	500,000 to 0.0 to	109,164 t 329,636 t 9,981 t
Fibers	Aid for processing of straw and hemp grown for fiber		8,876 to; 750 to long flax fibres +	

Common Market Organizations	Negotiating issues	EU request	Romania request	Results of negotiations
Processed Fruit and Vegetables	National and/or Community thresholds/guaranteed Community area for processing aid		8,126 to short flax and hemp fibres 400,000 to fresh tomatoes out of which 50,000 to of tomato processed products 5,000 to net weight for peaches in syrup and/or natural juice 1,000 to net weight for Williams and Rocha pears in syrup and/or natural juice	
Tobacco	Establishment of production quota		21,300 to	12,312 t
Milk	Milk quota scheme T = D + Sales		7,500,000 to for 2007.	3,057,000 to = 1,093,000 t pentru livrare la fabrici, restul 1,964,000 pt. Vanzari directe + 188,400 t rezerva restructurare
Beef	(i) Additional payments (ii) Slaughter premium (ii) Special beef premium (iv) Suckler cow premium		1,583,000 (adults; 1,498,000 calves; 85,000) 725,000 (1,550,000 for 2007)	858,260 A 1,233,000 (adults; 1,148,000 calves; 85,000) 452,000
Sheep meat	(i) Ewe premium (ii) Additional payments, global amounts		150,000 heads for 2007. 8,900,000	150,000 heads 5,880,620 heads 6,216,782 A
Honey			1,449,000 beehives	
Hops	Support scheme for hops production		No position	198 ha
Seeds	Financial aid to seed producers			Rice: 100 to Others: 2,294 to

Common Market Organizations	Negotiating issues	EU request	Romania request	Results of negotiations
Nuts				1,645 ha

(2) Non-financial issues

Romania position	Negotiation result
A transition period of 3 years for modernizing and re-vamping the slaughtering and meat processing units, milk processing units, as well as for the organizing the milk collecting and standardization centers in compliance with the Community requirements and for complying with the Community requirements regarding cow milk farms and quality of raw milk obtained.	Transitional periods of 3 years for modernizing and upgrading 26 slaughtering and meat processing units, two poultry meat processing units, and 28 milk-processing units to meet EU requirements, as well as for the organizing the milk collecting and standardization centers and for complying with EU rules on dairy farms and the quality of raw milk obtained.
A transition period of 4 years for organizing the vineyards inventory and register.	Classification of Romanian wine areas in line with Romania's proposals.
A transition period of 8 years for the removal of hybrid vineyards (Regulation 1493/99)	An eight-year transitional period for removing prohibited hybrid varieties of vine. Supplementary rights for planting vine varieties for quality wines produced in specified regions, corresponding to 1.5% of the total vineyard cultivated area. Right to add sucrose to enrich grape must so as to increase the alcoholic strength of wines.
	Recognition and protection of designation of origin and geographical designation for a number of spirit drinks made of plums and of wine distillate, types of milk, yogurt, butter milk, cheese, salami, sausages, bread, pretzels, pie, and processed fruits.
Appliance of the provisions relating to the conditions for the production, products characteristics and placing on the market of the traditional cheese brands Nasal, Bradet, Homorod, (smoked cheese, etc).	Degradation from veterinary norms for producing by traditional technologies 58 types of cheese and cow, sheep and buffalo dairy products.
	A transitional period of three years for the use of certain plant protection products containing active ingredients no longer used in the EU.
	Recognition and protection of the generic designation of a spirit drink.

Source: Data collected from European Commission, Enlargement and Agriculture; Romania Details *Its Accession Terms*; and Romania's *Position Paper*.