
CONCERTATIO

Operationalization of Outcome Features from the Versailles System

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The dysfunctions which exist between European organization and the idiosyncrasies based on historical reality continuously represent and illustrate an actual state of affairs.

Introduction

THE APPLICATION of ontologies in historical studies can capture domain knowledge of the reference event generically and provide an understanding of the complexity of a domain.¹ Because the vocabulary of ontologies is usually organized in taxonomy, it offers the opportunity to operate the relations between primitives through concepts and axioms which characterize the reference event.² Due to that, the utilization of ontologies in historical analysis can answer the structuring problems that arise from the complexity of systemic reconfiguration. Namely, ontologies are capable of providing a formal conceptualization of a domain that was shared in history by a group of actors or countries during the period of a common situation.

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Most historical events support the construction of ontological relations but they did not allow the development of domain relations or conceptual relationships with a direct reference to the causes, controls, or sources. Because of that, we chose to extract the significance of specific domains from historical observations and descriptions using a vocabulary-based approach. Thus, the analysis in the present paper appears as a projection of the historical reality into an ontology architecture that seeks to explain the complexity encapsulated into domain dynamics.

The topic subjected to this kind of investigation reveals the implications of the reconfiguration of the European structures after the Great War. Particularly, this topic attempts to explain the changes in Central and Eastern Europe that were prompted in the context of the systemic reconfiguration. To some extent, I corroborate the diversity that emerges from the breakup of the Austro-Hungarian Empire, and its implications for the regional order. Through that, I attempt to analyze the consequences of the new stability design for regional structures. The paper pursues one underlying theme: what the reconfiguration of Europe meant, as an act of progress, for the successor states of the Austro-Hungarian Empire. The next section presents the analytical premises concerning historical knowledge. In section 2, a detailed description of the operational perspective is given. Section 3 presents an overall architecture of the reconfiguration process in Central and Eastern Europe. Section 4 highlights how the Versailles system determined the historical evolution of the regions. Finally, the last section is devoted to conclusions.

1. Analytical Premise

THE MAIN premise of the study is that Europe's functionality, as a core of power, had become an old topic even before the Great War.³ Hence, the reformulation of the European space through the Versailles system depended not only on a "balance of power," but on how an adequate configuration was able to relax the "pressure" based on modern "shared practices."⁴ More precisely, the continental situation after the war requests a model of interaction where the vectors which determine the functionality result from international dynamics rather than tradition.

For the drive paths of Europe, these new aspects of reality addressed a real challenge to the functioning of traditional actors. In many ways, the mainline of the challenge follows the power distribution around the "Concert of Europe."⁵ Based on that, the new problems were directly related to the agents' capacity for resilience into an extensive and more complex framework. In broad terms, this

situation was the consequence of the fact that the old paradigm could no longer keep up with the tempo of change induced by the Second Industrial Revolution. In Europe, the “social question” had come to pursue the imminent social and political disintegration of empires as a reboot of the entire order and configuration of the old world.⁶ Due to that, the social, cultural, economic, and political perspectives received a complex meaning in the new geopolitics and geostrategic framework. For the new states which emerged from the old European empires, this framework became a quest for an international positioning that implied a significant transition in the state of structural formation.⁷ Nevertheless, this situation proved to be a critical point for the evolution of Europe. Under the pressure of modernity and of the tendencies of the main European actors, in order to preserve the political tradition of power, the sensitivities and historical idiosyncrasies appear to have contributed to the alteration of the process in a relatively short timeframe.

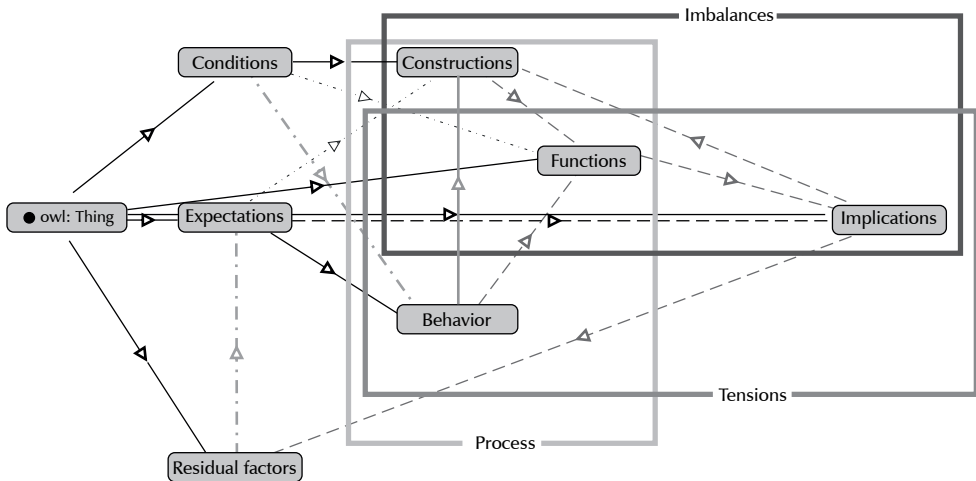
According to this premise, if we can show that the peace system at Versailles matches the modern model of the international system, then we can argue in favor of the change of utility functions from the configuration paths chosen in Europe. Furthermore, if we extend this logic to the implications of pressures by way of the Goldmann model, it is possible to construct a field of probabilities.⁸ This action is useful in analyzing why the Versailles peace system did not fully produce the expected effects, in particular for regions, and what would have been the alternative reality in the absence of the Versailles system.

2. Operational Perspective

A DETAILED IMAGE of the premises appears in figure 1 through an ontology architecture of functionalities. The diagram highlights the surfaces that show the imbalances in the reconfiguration process of Central and Eastern Europe. In this design, all surfaces follow the Goldmann description. Hence, the function that generates instability starts from the relationship between environmental circumstances, the set of expectations, and residual factors that signal the revisionist elements and tendencies. The first change in the instability degree results from the disagreements that exist in the processes. The main reasons for this deterioration were the introduction in constructions of circumstances that are related to a weak environment and the applications of expectations in questionable behaviors. Also, the processes can be the source of disagreements if they are overwhelmed by the reference reality. This last aspect is a direct reference to how the methods work, and to the adaptability of the desktop. Yet, in certain conditions, the dysfunctionality of processes can appear

as a consequence of certain situations which amplified the existence of residual elements. The revisionist tendencies after the First World War or the historical idiosyncrasies of the European actors are two examples of how the processes may be altered in their running by resorting to the past.

FIG. 1. THE GROUPS OF DYSFUNCTION



The second element from the development of imbalance are the tensions that result from the validation mechanisms. If we interpret the situation after 1918 through the Goldmann approach, the Versailles system appears as a validation of a reality that replaced the old logic of the European paradigm. The confirmation of the post-conflict fact as a whole requests the ratification of certain aspects by each group of participating actors. In the case of Central Europe, this aspect involved the multinational organization as a description of the domination of the Austro-Hungarian Empire in the region. Because of that, self-determination and the desires for national unification emphasize the empire's dysfunction as a lack of validation mechanisms for the organization's legitimation. The ratification of these advanced aspects develops the problem as a confirmation of reality.

On the other hand, Austria and Hungary, under the influence of certain residual elements, create a behavior of partial validation that generates a low acknowledgement the new realities. This outcome was a poor acceptance of the truth, which in the end altered the regional perspectives on the treaties of Saint-Germain-en-Laye and Trianon. Additionally, some successor states understood the validation mechanisms as mere arguments for the historical processes of self-determination and national unity. This situation determined the new actors, which emerged from the disintegration of the Austro-Hungarian Empire, to

develop a perception of reality based solely on a historical perspective. This limitation requires that the ratification deals with the new fact through a mechanism that confines the interpretation of the treaties to the context.

In both cases, the major shortcoming was the elimination of the integration principle as a necessary function for the organization of implications. The elements of this situation can be identified in different forms and in all particular processes which exist at the European level. These disagreements in validation that existed on the systemic level regarding the perception and management of the reorganization gave rise to certain blackouts. Their association with the residual forces triggers first and foremost the alteration of the association function between the expectations of actors and the implications of reality.

The third surface, in figure 1, highlights the judgment processes that note the composition of the future models of configuration. Relating the imbalances to these dimensions highlights, in a strict way, the inconsistencies that have arisen. This desktop follows the relationships created through the Versailles system between nations that were and are understood to be distinct following the reshaping of the balance of power, and the rethinking of the equilibrium of forces. This brings to light the dependent variables linked to entering into the model of relations as a report between the possible geometries and the references to systemic effects.⁹ Because the First World War and socio-political changes destroyed the old organization of the international system, the European structure established in 1838–1840 became irrelevant for the assurance of stability. This strategic situation made necessary the rethinking of the security environment through a formula able to avoid the reintroduction of the old vectors of power. The idea was to search for a blueprint able to facilitate a form of cooperation between states, allowing them to pursue more than just their interests.¹⁰ This detail was misunderstood in the policy of the Triple Entente and gives a preventive sense to the phrase “security through insecurity.” Unfortunately, due to the old frustrations and the losses suffered in order to obtain the victory, the powers of the Entente transformed the phrase from an object of international policy into a consequence of that. This transformation produced dissension into the geo-strategy of post-conflict, whose effects were strongly felt under the conditions imposed on the Triple Alliance.

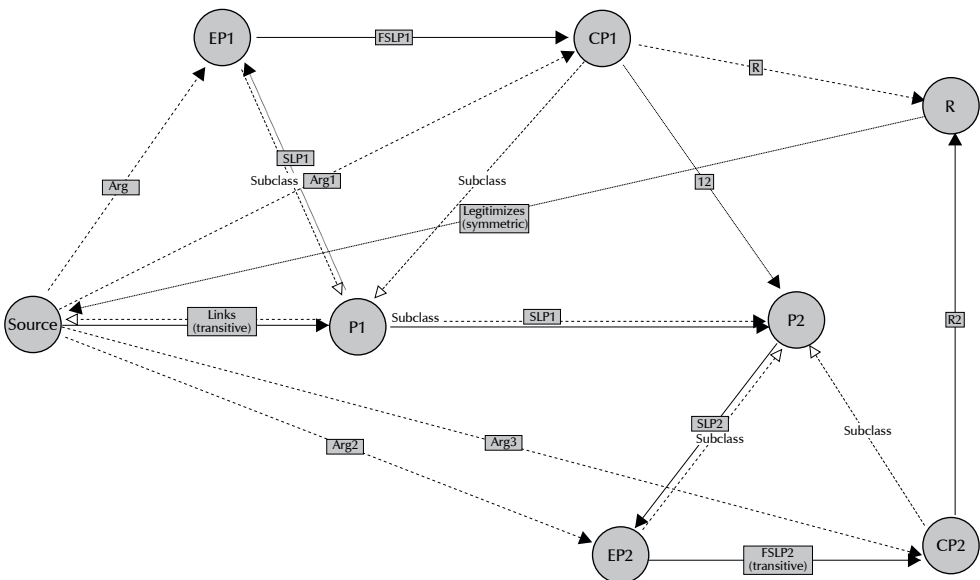
From this point of view, the imbalance appears due to the lack of a concept, which offers a complementary perspective to the security framework based on collective security. Due to this divergent behavior of the policies of power, the constructivist lines for the optimization of the actors’ position shifted to a dubious alternative of maximizing forces that was similar to what the security dilemma describes. The option for this imbalance follows the distribution of regulations over the security framework as a function of moderation addressed

to the sources of context. This vision focused on the construction of a dynamic security environment whose points of stability stem from the mechanics of the variables, without a rigid or static character. Thus, the process of the decentralization of power tended to be replaced with the formulation of interest points.

3. The Ontological Design of the Reconfiguration Process

THIS PART formulates the architecture of ontologies for the regional reform after the disappearance of the Austro-Hungarian Empire. This operation creates the formal image of the two processes in the Versailles system, which redefined the structure and the relations between the successor states. The two treaties introduced in ontological constructions are the treaties of Saint-Germain-en-Laye and Trianon. In this respect, we should highlight the force elements which exist within historical facts and are admitted as truths.

FIG. 2. THE ONTOLOGICAL FRAMEWORK OF THE REORGANIZATION PROCESS



The framework in figure 2 is a mechanism based on a chain of processes, P1 and P2. In the relationship between them, implications—EP1, CP1, EP2, CP2—are functions for the secondary methods. Also, processes can express conditions—

P1, CP1, EP2—of other operations—P2, CP2, R. The logic of the architecture follows the lines between the source of a process, which represents the peace system at Versailles, and the expected results—R. Related to the context after the First World War, these results express the search, identification, and implementation of the new stability points which were to sustain the reconstruction of Europe. Thus, between the two elements—source and results—is required a symmetrical function able to ensure legitimacy. For the process highlighted in figure 2, the role of this function is fundamental because it argues and demonstrates the high value of the notions and trends of the base—the peace system at Versailles. A relation between the new elements which bring novelty and the old “cultural” paradigm of the organization is therefore brought to light.

The processes P1 and P2 describe the Treaty of Saint Germain-en-Laye and the Treaty of Trianon as a transitory function. In the logic of the mechanism, the treaties are validation points that have a role in strengthening the previous steps from the chain between source and results. This status allocates them a representation with more than just a formal framework for the continuity of a process. Nevertheless, from the viewpoint of the mechanism of ontologies, both treaties appear to be modeling components for the performances within a complex construction. For each settlement in figure 2, the effects and consequences derive from P1 and P2 as sub-ontological constructions. Hence, EP1 and CP1 are sub-ontological groups attached to the Treaty of Saint Germain-en-Laye, and EP2 and CP2 are the groups attached to the Treaty of Trianon. All elements are introduced in the process through reflexive structures. This underlines the complexity of the system and the conditionalities of the architecture.

The meaning of both structures is entirely reflected in the image of the architecture in figure 2. Because of that, the treaties appear in the peace system of Versailles as sequential stages that need to solve distinct parts of the same puzzle. In the general framework, their role was to develop a new structure of functions in the central-eastern region to strengthen the latest stability and peace designs. Based on these lines, the relation to the ontological sub-structures came to straighten the functionality of the transitive function through the reference to different aspects of the puzzle. Hence, the conditions which result from effects—EP—and consequences—CP—create rules for the sequencing of stages within the process. Due to that, the requirements for any subsequent outcome describe the source argumentations from the perspective of expected results.

For that reason, if we relate the complexity of the ontological architecture to the nature of the reference puzzle, it is easy to understand that the entire construction describes a logical mechanism that legitimates a building process for new stability points. This description seeks nothing more than a correlation able to ensure the functionality of these points in the new type of configuration.

To give a transcription to the function of dynamics from the reorganization architecture in the relation with historical sensitivity in Europe, we need a specialized vocabulary. This dictionary seeks to offer to the ontology of P1—Treaty of Saint-Germain-en-Laye—and P2—Treaty of Trianon—a particular feature of symbols and a set of axioms which would describe their complexity. The necessity for this analytical approach is highlighted in the work of Farquhar et al.¹¹ The process executes the conversion of the set of axioms related to the source in the collection that characterizes P1. The argument of P2 follows the same idea, with the distinction that it first connected the cause, and then to P1. A translation system is thus obtained.

The logic line for this is:

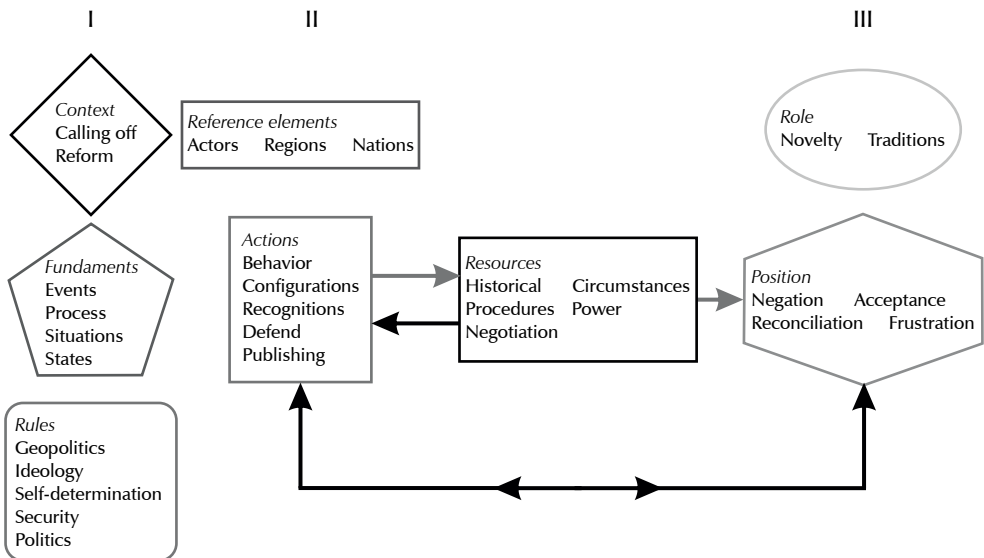
Input: paradigm S_t , concept $z - 1$

ontology S_{t+1} , conditions of the new theory $v_{P1} \leftarrow C$

Outcome: P1- reference

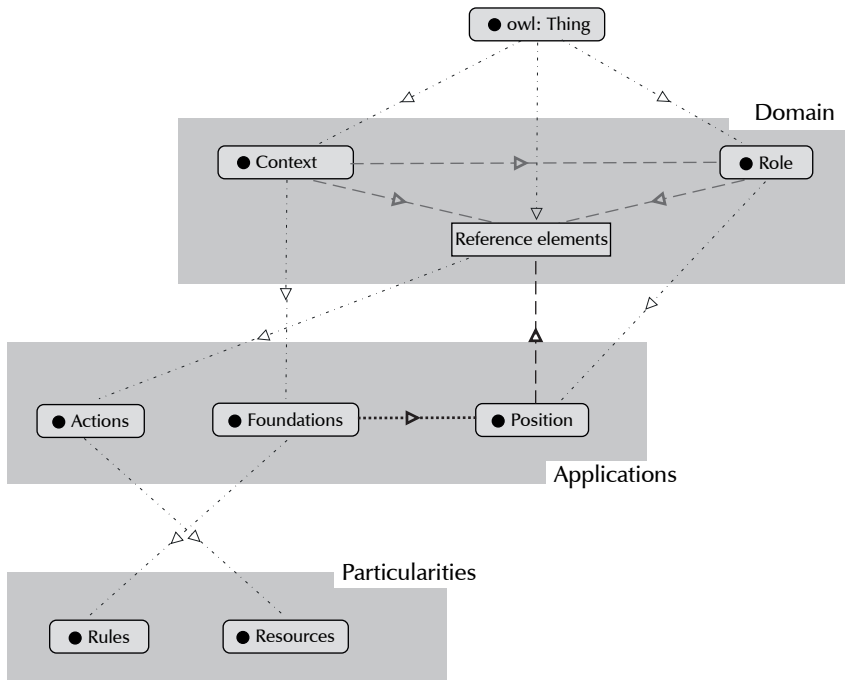
If run the descriptive framework regarding the postwar situation, the Versailles system needs to perform results a set of categories that define a specific arrangement. Based on that, it is assigned a possible merger of operations between different concepts in the ontologies. This generates the option to assemble new categories of combined concepts.

FIG. 3. THE PROJECTION FOR THE ONTOLOGY OF THE SITUATION



Based on this decoded filter, the design of the reference ontology for the Treaty of Saint-Germain-en-Laye expresses a reformulation of relations between the successor states of the Austro-Hungarian Empire that share the same stories with Austria. This backdrop emphasizes the existence of an act that seeks to integrate a factor to stabilize the result of stories in the context of the dismantlement of the old order. The description shows the taxonomy of the hierarchy in figure 4.

FIG. 4. DESCRIPTION OF THE SITUATION THROUGH THE HIERARCHY OF GROUPS



In the European context, the Treaty of Saint-Germain-en-Laye was an act directed toward specific vectors that needed to solve the stability issue. Because of that, the treaty came to formulate stability through transparency and the clarification of positions rather than through uncertainty.¹² For that purpose, the mechanism proposed to construct a pragmatic solution sought to replace the domination relations with relations based on recognition between modern and sovereign states. Thus, in the regional context, the legitimacy of the mechanism was founded on the existing situation. Namely, in the absence of the empire, relating to the old framework became unfounded. Second, the regional case addressed a reality where the reference point—power through tradition—was

replaced with the historical processes for national unity. Thus, the sources for legitimacy become the supply point for the complexity of the situation due to the theme of nationalities. Therefore, the Treaty of Saint-Germain-en-Laye had to orient itself towards the historical frameworks shared by the regional actors.

This necessity brings into discussion the setting of geographic borders based on civic nationalism and the ethnographic principle, as a manner in which to approach the subject of nationalities.¹³ Accordingly, the solution requests the introduction of new laws and elements to facilitate a realistic approach which follows the historical lines.¹⁴ This aspect sought to clarify the status of the nations in the region based on the rules which result from the fundamentals. In the long term, this represents an action of arranging, which pursues a clear definition of reference relations between agents.

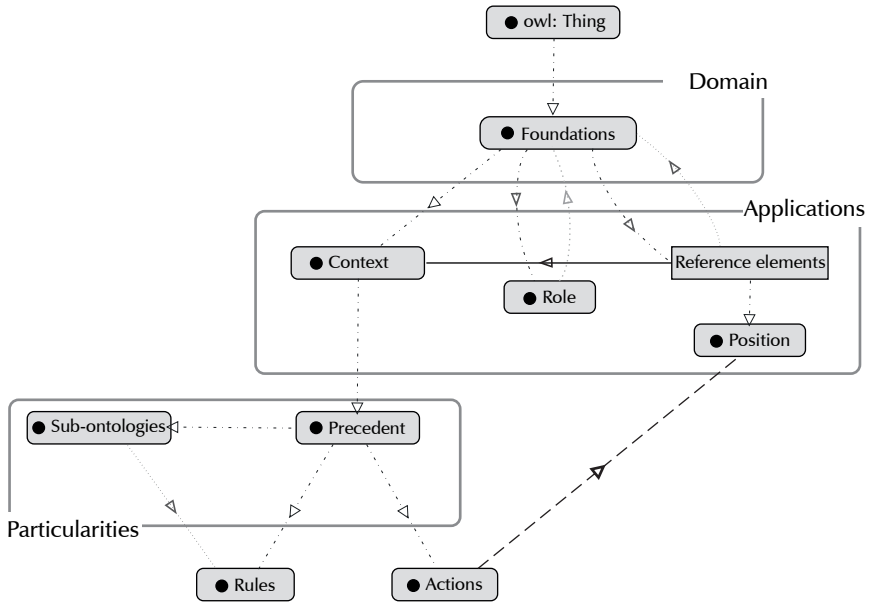
TABLE 1. TYPES AND CHARACTERISTICS OF THE SUB-ONTOLOGIES

<i>Mutual acceptance:</i>	<i>Strategic:</i>	<i>Partition:</i>
Austria–Italy Austria–Romania Austria– Kingdom of Serbs, Croats, and Slovenes	Austria–Czechoslovakia	Austria–Hungary
Recognition of historical and sovereignty rights	Defensive and preventive character	It has a conflictual nature
Endorsing the principle of nationalities	It partially accepts the role of ethnic distribution	It addresses the reconstruction It has a political character
Acceptance of the self-deter- mination law in the relation with ethnic distribution	It seeks to define a point of stability	It determines an extended settlement process
Recognition of independence for the successor states	It relates to the possible precedents and risks Recognition of independence for the successor states	Recognition of independence for the successor states

The sub-ontologies in table 1 capture how the understanding of the context determined the interchange of the rules in the fundamentals. For the entire process, the sub-ontologies set shows an interconnectivity between the new relations which sought to draw a competitive framework based on the equilibrium of forces. Along this line, the Treaty of Saint-Germain-en-Laye tends to provide a framework of cohesion for the interactions among actors. The historical processes created the necessity and the request to approach the possibility of a harmonization of expectations towards reality. Hence, in all three cases in table 1, the analysis of ontologies reveals that the treaty tended to be the projection of a particular logic for the construction of specific models.

For the Treaty of Trianon, the implementation of the Treaty of Saint-Germain-en-Laye determined the existence of a continuity in the regularization process between successor states. Thus, the acceptance and recognition of the Treaty of Saint-Germain-en-Laye by the regional actors created the legitimacy for continuing the process in the Hungarian case with the successor states.

FIG. 5. THE CONFIGURATION OF THE ONTOLOGICAL GROUPS FOR THE TREATY OF TRIANON

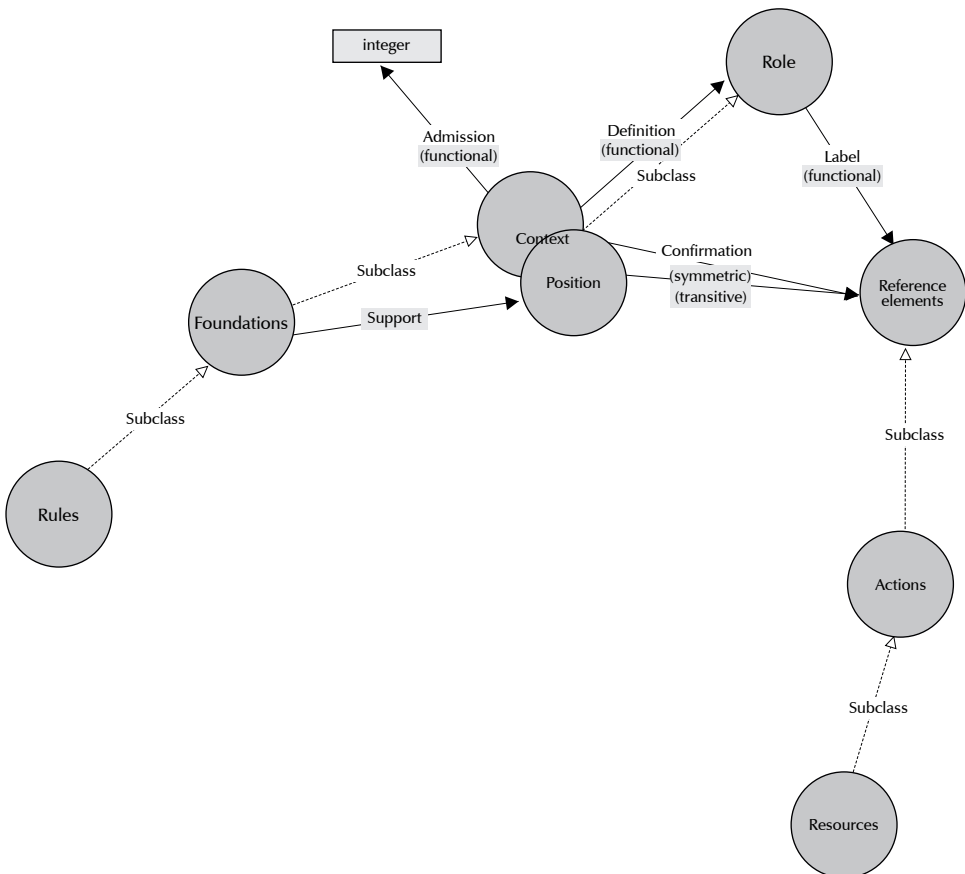


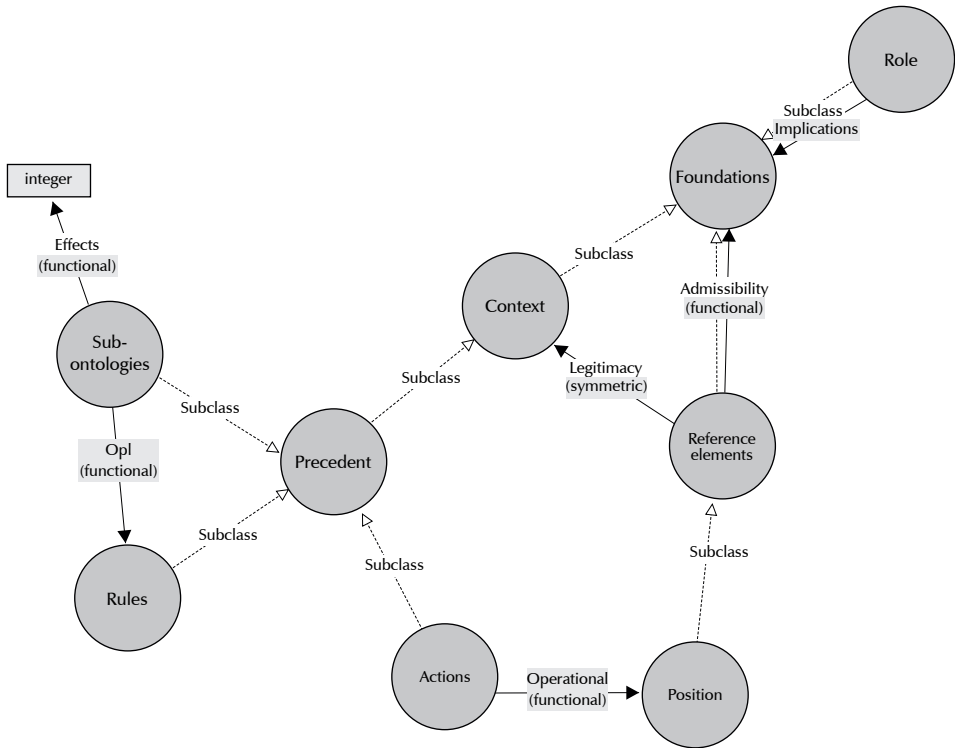
From the perspective of the regularization of relations, the Treaty of Trianon was focused on the relationships between Hungary and his neighbors: Austria, Czechoslovakia, Romania, and the Kingdom of Serbs, Croats, and Slovenes. Similarly, with the Treaty of Saint-Germain-en-Laye, the Treaty of Trianon came to recognize the other part from the old monarchy—Hungary—as a distinct and independent state. Because of that, the treaty discusses the situation of Transleithania from the perspective of the self-determination rights of nations. From a political perspective, the Treaty of Trianon straightened out his legal framework with effects on the recognition and acceptance of a reality which already existed for all five countries. Thus, because the case of Hungary presented similar elements with the Austrian case, based on the precedents created by the Treaty of Saint-Germain-en-Laye, the main topic was the right of Transleithania to territorial unification. In this case, the main argument that underpinned the process was the distribution of ethnic groups for the recognition of nations.

In the case of the Treaty of Trianon, the tensions were due to a mismatch between Hungarian expectations and reality as well as historical truth. Namely, the government in Budapest recognized that Hungary was an independent state, which reflected the revolutionary ideals of 1848. Despite that, the issue of the borders was continually understood by the Hungarian politicians from the perspective of “Old Hungary,”¹⁵ which sought to maintain the prewar territorial status quo. This situation of political opacity and refusal of reality was the source of unfounded tensions in that context. From the perspective of the ethnic structure, however, “imperial” Hungary was a collage of nationalities inherited from the design of the Austro-Hungarian Empire.

Comparing the two treaties from the perspective of sensitive development (fig. 1) we notice the existence of a different configuration in the features that characterize them.

FIG. 6. COMPARISON BETWEEN THE DYNAMICS OF CONFIGURATION





The first figure describes the configuration of the ontological construction of the Treaty of Saint-Germain-en-Laye after the introduction of dynamics. Relating the structure to the security environment highlights the tendencies towards creating a “center of power” which would reduce the tensions. The groups which were formed—role, reference elements, and the combination of position and context—acknowledge the existence of an environment which is related to the reality recognized and assumed by the actors.

This fact means that the actors’ behavior is established based on a factuality different from a negation of what exists. Namely, it admitted the necessity of cooperation for what all actors recognize and validate by mutual agreement. The formulation assumes that the Treaty of Saint-Germain-en-Laye attempted to harmonize relations based on the accords among actors. From a formal perspective, the existence of an equilibrium center constructed based on an assumed position express the tendency to search for a common point against which to establish the pressure forces. Following this line, the operation model of the fundamentals and actions describes a logical scheme of application for the increase in performance. Thus, if we overlap the first figure with the images of the domain, forms, and particularities, it results that the rules and resources are sources of influence, not

factors. Therefore, the active character is replaced by a passive one. The results determine a rational logic based on an equilibrium center that was assumed by the actors. Concerning that, the foundations and the actions groups become operative elements, which means that the equilibrium center determined the models and the order in which they are to be used. The result of this dynamic was that the reporting vectors could be controlled with what the stability center indicated.

The second image in figure 6 is the representation of the Treaty of Trianon after the introduction of dynamics. This form of organization for the architecture exemplifies a model of reaction-answer. This model can appear distinct from the opening of precedent as a convergence point for the rules and actions. However, the changes from the power function which generate the patterns of behavior are possibly the reason for the failure of actors to assume their position in the context. Due to that, the expectations of actors exceeded the possibilities offered by the logic. Therefore, we need to specify that there exists a chance for this to be the act of a group, and not necessarily of a single actor.

What seems to be certain, however, is the existence of a tendency towards improving the actors' position to increase their gains. Hence, the new logic supposes that the limits of the equilibrium center, which offer the ratio, could be pushed to the maximum. Technically, this means that the role and position of actors no longer support the importance of foundations. This act means that these two elements pass on a secondary level. Along this line, the first stage shows that relating the position to the context possibly offered much more to the actors through relaxation. How any new position needs securing, the theory reveals that in the absence of equilibrium or of any balance of power, the functions of forces become elements of strengths. This situation also occurs: the context and the aspects of the relations that were fundamentals become points of pressure. This means that any framework cannot accept a discordance in the continuity of the first backdrop through the overlap of several logics with a conflicting sense.

At this point, the second stage emerges as a reaction to the lack of introduction of all groups based on the same logical scheme. This stage is a correction mechanism that admits the precedent and the role of actors as conditions for maintaining the limits. Because of that, the two groups align with the context and the foundations as factors of confirmation and control. Through this action, the alignment creates an invalid reality where, based on some expectations requirements generate an alteration of coherence that could not be confirmed.

The operation of the ontological architectures, from the perspective of security, highlights a number aspects. Although the settlements appear in the same context and the same puzzle, their insertion in the security environment leads to two models—one of stability, and another of alignment. However, both models follow a similar goal by relating to an aspect of the same problem—the new

relations between the successor states. The production of tensions needs to be understood as an artificial effect of the actors' understanding of the reality in which the treaties operate. Figure 6 emphasizes this state very well. Secondly, both treaties were produced in a fact which already exists and contains the historical processes. It is hard to believe that, in the absence of these aspects, it was enough to have a single systemic event which would produce the consequences and develop them in such a short time.

The simulation of vocabularies is an instrument of analysis addressing the complexity of situations and events. It can help to find or to identify patterns that can allow us to explain the complexity from the point of view of the reference domains, without a reinterpretation. The simulations in this paper show that the role of both treaties was one of organization, and not to straighten out the processes to a predetermined result. In this sense, the treaties offered a modern approach and perspective on specific processes that were almost complete. Thus, the treaties came to highlight the need to view and integrate the results into a new paradigm.

4. Prospection of the Potential Alternatives

THIS SECTION is devoted to the construction of a broad explanation of the manner in which the Versailles system determined the historical evolution. Mainly, it outlines the future to which this system referred and what it represented for the development of Europe. For this process, I am concerned with the distribution of probabilities in the historical process and with what the scenarios contained. On this basis, I shall devise an inverse operation to relate the expected result to the existing reality.

For a start, consider the existence of a finite Markov process, which expresses a Chapman-Kolmogorov relationship. To the process is attached a limited set of discrete states $S \in (s_1; \dots; s_n); n \neq \infty$. Also, there exists a string of discrete variables $(V_n)_{n \in \mathbb{N}}$, so that for each variable exist a state "s." Thus, for every pair $V_i = s_i$ exists a probability $p_i, i \in S$ through which it is understood that the probability can cover the set of finite states S of the process.

$$P(V_1 = s_1; \dots; V_{n-1} = s_{n-1}; V_n = s_n) = p(s_1) \prod_{i=1}^{(n)} p(s_{i-1})(s_i) \quad (1)$$

$$\begin{cases} p_i \geq 0; \forall i \in S \\ \sum_{i \in S} p_i = 1 \end{cases}$$

For (1) it is considered to exist a transition matrix of the states $p_{i,j}^n$, $i,j \in S$; $n \in \mathbb{N}$, which determine the probability of passing from state “i” into state “j” after “n” stages.

$$\begin{cases} p_{i,j} \geq 0, i,j \in S \\ \sum_{i=0}^n p_{i,j}^n = 1, \forall j \in S \end{cases} \quad (2)$$

From (2) we figure out that, knowing the initial state “i” of the Markov process, the probability of the process to be in a state j, in a particular moment “s,” after transit “m” is: $p_{i \rightarrow j}^0 = p_{i \rightarrow j} = p(V_{o+m}(s)=j | V_s=i)$. If we consider this moment as a “reference” for the possible final state, then for the alternatives of the likely final states we have:

$$p_{j,s_n}^m = p[V_{s+m}=s_n(\sigma) | V_s=s_n^i]; \forall s \in [0; 1]; n \in \mathbb{N}; s_n, s_n^i \in S \text{ and } s_n \neq s_n^i \quad (3)$$

$$p_s^{(m)} = \sum_{s_n \in S} p_{s_n} p^{(n)} s_n^i$$

Namely, $p[V_{s+m}=s_n(\sigma)]$ is the probability that in the final moment the process “n” would determine a set of possible variations for the final state. Through that, I consider that on the basis of the historical process described in (1), we reach a point of reference that will be allocated to the final set of scenarios and can be distinct from what the beginning can foreshadow.

Hence the premise that there exists an event or a previous group which was determined by a specific combination of variables. Namely, from a succession of individual states which facilitate the appearance of the requested state:

$$E = \{C_{V_n}^k \in E^{(n+1)}\}, n \geq 1$$

In what follows, I will refer to the E as a general past which is constructed on a specific combination of states, such as $p = \{C_{V_{(n+1)}}^k = s_{i+1} | E(n) = j_n\}$.

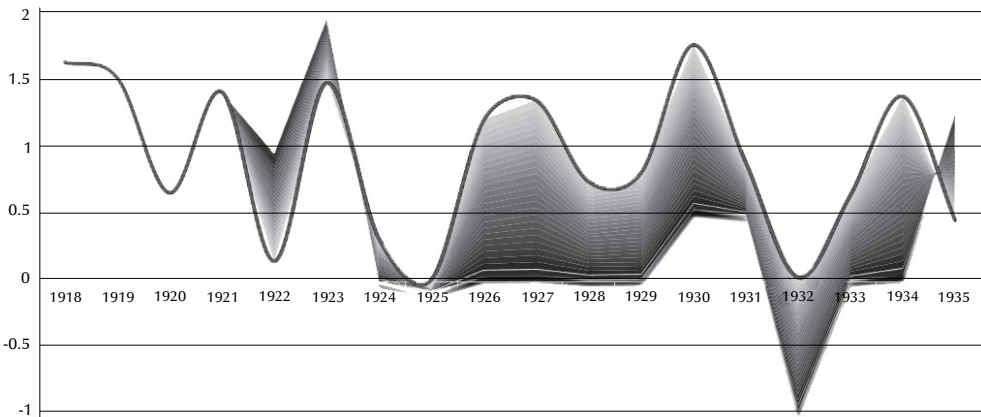
From this, we can admit that in the Markov process, the reference state of the final state is independent of the combination of the vectors, if the reference point is known

$$p(s_n | V_m = j_m) p(E | V_m = j_m)$$

On the contrary case, the final state is dependent on the previous events that were determined by certain combinations of variables. In other words, if in a particular moment the history confirms the existence of a reference point for how things evolve in the case of Europe, then the mathematical part reveals that the outcome was determined independently from the previous events of that point. Thus, the result is generated by the existence of that precise combination of variables.

For the construction of the image, I consider that S has 27 states, which represent the short horizon between the end of the First World War and the year 1935. Let $p_{1 \rightarrow 27}^{(27)}$ be the probability of passing from the first state (1918) in a 27 state (1935) through 27 moments, thus, $p(V_1=s)=p_s$; $s \in [0; 1]$, where 0 is absolute stability and 1 is the maximum risk. Also, I consider that there exists a finite set of events $E \in \{E_0, \dots, E_v\}$. These are induced randomly into the reference process. For that, the only rule about these events is: the first event has an appearance probability, and other $q=1-p$ do not appear; for this first event, the appearance of activities is strictly independent. The next event, however, is linked to the distribution of probabilities of the first event, so the probabilities p_2 and q_2 can obtain values which reflect the first one, but without determining in a conditional way $p_2(0; 1)=p_2(p_1, 1-p)$. We refer to this aspect as the influence of probabilities.

FIG. 7. THE DEVELOPMENT OF STATES UNDER THE MARKOV PROCESS



In the simulation in figure 7, I consider that the value of each state is established randomly, according to the distribution of dependent variables. This decision allows us to find that the horizon of consequences, through the Versailles peace system, was open to every possibility. This leads to the assumption that the only factor for the determination was the collective mode of actors to relate to the peace system. Nevertheless, it can be observed that through the behavior of the historical process, the state developed contrary to the trend. Namely, the volume of the negative perspectives grows to underline the induced evolution. The existence of this fact determines the possibility of two scenarios. The first is to focus strictly on the behavior of actors, which defines a preexisting problem. By this we understand that the actors accept the construction of a competitive

framework aimed, based on the obtained position, to increase the gains for the consolidation of what they get.

On the other hand, there are actors for which the losses suffered transformed into frustrations. For these, the entry into the game means the possibility to regain what they lost. In classical terms, this became a competition for power in the general environment, which was undergoing reorganization. Therefore, given that the gain probability relates to the probability of losses for other players, based on this kind of game, is not hard to imagine the consequences. Namely, there exists a point from where the injuries are unsustainable. This situation describes the reference moment from which the evolution of the state was negatively affected, without a reversible possibility.

The second scenario describes how the state develops from a systemic perspective. Namely, besides the actors' behavior, there exist factors of force that generally result from how the reorganization of Europe was made. In this context, the historical tendency of the actors to integrate two paradigms in the same process proved to be the source for the development of an extremely volatile environment for these elements. Due to that, the new structure becomes less capable of reacting to the new type of challenges. Besides these, I emphasize the economic collapse from the '30s, the postwar situation, or the institutionalization of the international environment. Second, the actors' attempt to introduce some political artifices to the detriment of the continuity of the reorganization process represents a decisive step toward instability.

All these elements affect, more or less, what the Versailles peace system needs to represent. According to the result, the Versailles system means a process of political, social, and economic convergence of European states. This direction of development was a necessity for the adaptability to the new context of transformation, which needed to be based on European culture more than on previous practices. In this sense, it is essential to mention that the equilibrium between nations and their ability for competitiveness, as lines introduced by the Second Industrial Revolution, become logical trends in a complex reality.¹⁶

From this point of view, the alternative for Europe was a modern desktop of competition, which finds its sources of development into a continuous process of convergence. From a political perspective, this rethinking of the order means the transformation of power obtained through domination and force elements into a mechanism of global influence. For the European states, this fact represents the replacement of some geometries of power that were rigid in a standard configuration. Thus, it is possible to admit that the entire peace system at Versailles was nothing more than a process aimed to transform the center of power into a construction adapted to the new international paradigm.

Between what happened in Europe and the opportunities set, the re-acceptance of reality and the actors' ambition to act based on a "pragmatic" vision were the elements that made the difference. The reconfiguration of Europe was a historical process based on reality and trends. However, the Great War did nothing but emphasize the social question in the peace model for the European future. The relations between some operational results from the historical analysis indicate that the future of Europe can be stable in the context of systemic changes only if they create equilibrium points. In the succession of events these could be obtained only through the replacement of imperial powers with the influence of collective construction. However, the latter was possible only through the regularization of relations between European nations based on a new paradigm. In keeping with this reality, the Versailles system produced a set of treaties that needed to approach different aspects of reality. At this point, the operational analysis allowed, for the two studied cases, to highlight the construction of the pattern in relation to the complexity of the context.

Through the patterns that we highlight it was possible to present an explanatory framework to the elements of modernity and novelty introduced in the future projection. In what concerns the main alternative, is necessary to mention that logic found its arguments and legitimacy in the historical tendencies towards European reformation. In this sense, the analysis shows that the main factor responsible for the failure was the static state diffused from the security environment to the peace system. Thus, the patterns which appear start to replace their original senses, which logically allow their functionality. I believe that this trend was the unstable element in the evolutive process which determined the historical variations and the change in information flows.

Conclusions

THE EXERCISE of the semantic approach in the historical domain allowed for an objective comparison between historical reality and the character of the dynamics of the regional processes. The explanations and interpretations show the existence of a strong set of axioms and principles that were attached to the vectors of the postwar reconfiguration of Central Europe. The results came to renew the complexity which exists in the postwar process in the context of the global transformation. The approach to ontologies that were associated with the tendencies which existed before and after the First World War reveals that the reorganization vectors that were attached to historical models cover a broad set of aspects. Thus, it is possible to affirm that the tensions and pressures created on the historical horizon of Central Europe describe a design

of collections with a high complexity. However, we must say that the primary source of these were certain situations and tensions between European nations, which the great powers had refused to acknowledge and resolve in the past.

The operationalization of this desktop emphasizes the fact that the power relations between actors are not adjustable based on the utilization of a single reference model. This observation results from the fact that the power-stability-risks factors do not have a clearly defined hierarchy. Thus, what can be decisive for a perspective could lose its meaning in the context. Because of this, the conditions which exist in interstate relations start to affect the mechanism for solving future problems. This situation describes the submission of the complexity to the preservation of stability in the power reports. Therefore, what should have induced a behavior intended to be more rational and tolerant in relation to the complexity of international relations, actually generated several false perspectives and causalities.

Regarding this state of affairs, the process of systemic transformation did nothing but emphasize the inconsistency of the argument for the continuity of political traditions in Europe. Therefore, the model seeks to cover the broadest possible number of aspects through the utilization of described indicators. What results from this action emphasizes the disparity which exists in the historical perception between the security desktop and the modern perspective on relations between states. Concerning these, the model showed that the dysfunctions which exist between European organization and the idiosyncrasies based on historical reality continuously represent and illustrate an actual state of affairs.



Notes

1. Oliver J. T. Harris and John Robb, "Multiple Ontologies and the Problem of the Body in History," *American Anthropologist* 114, 4 (2012): 668–679; Steffen Staab, Hans-Peter Schnurr, Rudi Studer, and York Sure, "Knowledge Processes and Ontologies," *IEEE Intelligent Systems* 16, 1 (2001): 26–34.
2. Rubén Prieto-Díaz, "A Faceted Approach to Building Ontologies," in *Proceedings of the 2003 IEEE International Conference on Information Reuse and Integration (IRI-2003), October 27–29, 2003, the Luxor Hotel and Resort, Las Vegas, NV, USA*, edited by Waleed W. Smari and Atif M. Memon (Piscataway, NJ: IEE System, Man, and Cybernetics Society, 2003), 458–465, doi: 10.1109/IRI.2003.1251451.
3. In this sense, the evolution of security logic and power dynamics in Europe are strong arguments for this premise. See: Jack Snyder, "Civil-Military Relations and the Cult of the Offensive, 1914 and 1984," *International Security* 9, 1 (1984): 108–146; Stephen Van Evera, "The Cult of the Offensive and the Origins of the First World

- War,” *International Security* 9, 1 (1984): 58–107; Scott D. Sagan, “1914 Revisited: Allies, Offense, and Instability,” *International Security* 11, 2 (1986): 151–175.
4. See: David E. Kaiser, “Germany and the Origins of the First World War,” *The Journal of Modern History* 55, 3 (1983): 442–474; Sean M. Lynn-Jones, “Détente and Deterrence: Anglo-German Relations, 1911–1914,” *International Security* 11, 2 (1986): 121–150.
 5. Sandra Halperin, *War and Social Change in Modern Europe: The Great Transformation Revisited* (Cambridge–New York: Cambridge University Press, 2004), 5–6.
 6. For how this topic was developed under the liberal international order, see: Paul Bairoch, *Economics and World History: Myths and Paradoxes* (Chicago: University of Chicago Press, 1995), chapter 2; Patrick Karl O’Brien and Leandro Prados de la Escosura, “Balance Sheets for the Acquisition, Retention and Loss of European Empires Overseas,” *Itinerario: European Journal of Imperial and Global Interactions* 23, 3–4 (1999): 25–52.
 7. Patrick O. Cohrs, *The Unfinished Peace After World War I: America, Britain and the Stabilisation of Europe 1919–1932* (Cambridge–New York: Cambridge University Press, 2006), 25–29.
 8. Kjell Goldmann, “East-West Tension in Europe, 1946–1970: A Conceptual Analysis and a Quantitative Description,” *World Politics* 26, 1 (1973): 106–125.
 9. This is the argument of the realist paradigm about the fact that the power of a nation can be influenced or constrained by the development that national policies can produce in the International System. We may thus argue that linking the possible results to the features of International System to the detriment of the forces within configurations direct the actor’s attention toward the interaction between systems. The avoidance of this reference system can be determined in the case of the great powers that tend to react to international challenges through national actions. Hence, the problems introduced in international relations by the states lose their coherence from a global viewpoint. See: Michael Mastanduno, David A. Lake, and G. John Ikenberry, “Toward a Realist Theory of State Action,” *International Studies Quarterly* 33, 4 (1989): 457–474; Gideon Rose, “Neoclassical Realism and Theories of Foreign Policy,” *World Politics* 51, 1 (1998): 144–172.
 10. Robert Jervis, “Security Regimes,” *International Organization* 36, 2 (1982): 357–378.
 11. Adam Farquhar et al., *Collaborative Ontology Construction for Information Integration*, Technical Report KSL-95-63, Stanford University Knowledge Systems Laboratory, 1995, 7.
 12. Alan Sharp, *The Versailles Settlement: Peacemaking After the First World War, 1919–1923*, 3rd edition (London: Macmillan International Higher Education, Red Globe Press, 2018), 14–15.
 13. Allen Lynch, “Woodrow Wilson and the Principle of ‘National Self-Determination’: A Reconsideration,” *Review of International Studies* 28, 2 (2002): 419–436.
 14. C. Luella Gettys, “The Effect of Changes of Sovereignty on Nationality,” *American Journal of International Law* 21, 2 (1927): 268–278.

15. George Sofronie, *Tratatul de la Trianon (din 4 iunie 1920) și acțiunea revizionistă*, 2nd edition (Oradea: Tipografia Scrisul Românesc, 1933), 19.
16. Adolph Lowe, "The Trend in World Economics," *The American Journal of Economics and Sociology* 3, 3 (1944): 419–433.

Abstract

Operationalization of Outcome Features from the Versailles System

Most historical events support the construction of ontological relations based on domain relations and conceptual relationships. On this basis, we aim to generate an operational desktop related to the reconfiguration process in Central and Eastern Europe in the period following the Great War using ontology architecture. The purpose is to extract explanations with a broad sense of the complexity related to the historical events that are studied. For this approach, I construct ontologies based on a projection of the descriptive framework of the history of the Versailles system in a dedicated knowledge-base. This makes it possible to extract candidate relations and then map them into a meaningful representation meant to facilitate ontology analysis. The paper discusses this prospection in terms of probabilities distribution from a Markov process as an image of the postwar historical reality.

Keywords

successor states of the Austro-Hungarian Empire, peace system at Versailles, ontology architecture, knowledge-bases, Markov process