

The Structural change in the International System: From a Modified Version of Neorealism

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Abstract

This paper analyzes how Waltzian neorealism by some modifications can explain and predict the structural change in international system. To answer this question, we extract the main concepts of waltz definition of the system and its critics then draw the theoretical scheme to find limitation and make a synthesized modifications on waltz international system to make it applicable to study structural change in the system. Our results showed waltz theory weaknesses in the first two elements of the structure. Results also show that the international system defined by waltz needs some modifications by adding up the structure of the process to exit from the problem of having no attention to historical and social basis of international outcomes. From a modified version of neorealism, this study emphasizes the need to take into account the impact of the structure of the process to the structural change of the system along with opening the first two element of the structure to change by taking into account the principle of segmentation and separateness to functional specification.

Keywords— Structural change, International system, the structure of the process, Modified neorealism

I. INTRODUCTION

Human social life in general is undergoing change. Therefore, the stability and continuity of the structures is not primary. Change occurs in two types: gradual and revolutionary structural. The collapse of the Soviet Union and the end of the Cold War, the collapse of the feudal system after the thirty-year wars and the beginning of the modern international system, or the end of the classical colonial system are such developments. Depending on different points of view, some of these cases are only gradual and intra-systemic changes, and others take them as structural change and transformation of system's structures. Buzan and Jones state that the focus of the great debates of international relations is the issue of change (Buzan et al., 1993). Some scholars refer to the era after the Cold War and the end of the bipolar system as "the era of post-international politics," "era of change," "fundamental change," or "transformation in the international system." (Koslowski & Kratochwil, 1994; Rosenau, 1990; Rosenau & N, 1997; Sakamoto, 1994)

Change and continuity are both characteristics of the structure of the system. Both structural change and continuity are important and affect our understanding of the nature of order in the international system. Some views focus more on change and alternative order in the international system. Some other views focus more on the

structural continuity of the system. The first point of view is revisionist and the second point of view is a point of view seeking the status quo.

The criticism of many experts to the theory of neorealism is the focus of this approach on the existing international system. They claim that this theory focuses more on the structural continuity of the existing system and order. They also claim that Waltz's theory of international politics is not able to predict structural changes in the international system. In other words, neorealism is a theory for analyzing the international system and the existing structure and not the alternative structure and system. (Ashley, 1986; Buzan et al., 1993; Cox, 1986; Ruggie, 1986)

Neorealism is the positivist and structural version of realism. This theory refers to the structure of the international system as the origin of international outcomes. This view is one of the outcomes of the second great debate of international relations. In fact, neorealism is a response to the debate of "traditionalists" on one side and "behaviorists" or "scientism" on the other. Behaviorists criticize traditional realists' focus on philosophical and historical foundations. Traditionalists focus more on human nature in its state of nature as the source of war and conflict. Behaviorists claim that this hypothesis is not provable with experiments similar to the

method used in science. Therefore, philosophical and historical foundations do not have a scientific basis. In response to this criticism, Waltz changed the classical realist foundations to the structural foundations in the international system. Therefore, he considers the structure of the system as the source of international outcomes. (Quinn & Gibson, 2017)

The neo-realist perspective has also received many criticisms from post-positivist approaches. The confrontation between positivists and post-positivists is the focus of the third great debate in international relations. Rationalists, including neorealism, accept the complexity of the social world, but prefer to measure and analyze observable issues. They are positivist in method. On the other hand, reflectivists or post-positivists are against these positivist methods of knowledge production. They advocate research based on interpretive and subjective analysis and believe that values are a part of observation. (Kurki & Wight, 2013)

One of the most important criticisms against neorealism is its neglect of the "possibility of change" in the structure of the system. Critics claim that this theory is too static. Therefore, the view of neo-realism is not able to explain and predict changes in the international system. Another criticism is that neo-realism is an approach "free of time and space." They state that social reality belongs to the historical context. The claim is that we cannot generalize a theory and law to the whole by abstracting reality from its historical context. In addition, we are not able to understand the whole from a limited and abstract part of the whole "free of time and space." (Cox et al., 2001; Cox, 1986)

Each of the major international relations debates focuses on one aspect of change. "Human nature" as the first image and "the type of states" as the second image are the focus of the first great debate. "The structure of the system" as the third image is the focus of discussion in the second great debate. Finally, the "structure of process" is the main topic of the third major debate on structural change and transformation (Buzan et al., 1993). The limitation of each perspective is due to the one-dimensional analysis of the international system. The purpose of this research is to present a "modified version of the neorealism perspective." This modification includes concepts taken from different perspectives, especially from the critics of neorealism. This research seeks a more comprehensive version of neorealism to provide a conceptual framework. This framework offers the possibility of structural change. It also shows the effect of changes in the structure of the process on any changes in the structure of the system and interacting units.

Statement of the problem: Change is an important feature of the international system, and the focus of all major debates in the field is the issue of change. When we look at the international system, we encounter two types of changes. One is gradual and the other is the transformation of the system. The transformation of the system is a structural and revolutionary change. To understand this type of change, we refer to Waltz's theory of international politics. Waltz states that a change in ordering principle and in the functional specifications is too rare and if it happens, it is a revolutionary change. The change can be in the third element of the structure "distribution of capabilities." (Waltz, 1979) As we know, in his theory, Waltz proposes the change within the system and does not consider a place for the transformation or structural change of the system. Neorealism's critics also claim that Waltz's theory is too static. Therefore, this theory is unable to explain the change in the first two elements of the structure of the international system. They claim that Waltz closed these two parts against any change. Therefore, this makes the theory that could not predict any structural change (Ashley, 1986; Ruggie, 1986). Others point to Waltz's lack of attention to the historical context and social forces as the weakness of his theory in predicting change and the possibility of its occurrence. (Cox, 1986)

By examining the points of view of Waltz's critics, this research tries to identify the limitations of Waltz's model of neorealism in explaining the structural change of the system. Therefore, the issue of structural change, its possibility and its origin based on the modified version of neorealism, is the issue of this research. In other words, the problem of this research is to show how this theory can explain and predict the structural changes of the international system by making reforms and moving towards a comprehensive model of the international system's structures.

Research Questions: Several questions drive this research. The main question is, based on the modified version of neorealism, how does structural change occur in the international system? What is the influencing factor for this change? In addition, why is it important to identify the component influencing change in the structures of the international system as a whole?

The sub-questions of this research are as follows; what is the limitation of Waltz's neorealism in explaining the problem of structural change? How does this research solve this limitation? In addition, why is it necessary to remove the limitations of neorealism to explain the structural change of the international system?

Research objects: The first objective is to explain the way of change in the structures of the international system as a whole based on the modified version of neo-realism in the form of the conceptual framework of this research. In fact, identifying the elements influencing the change of the structures of the international system as a whole is the goal of this research.

Identifying and examining the limitations of neorealism to explain structural changes in the international system is another goal of this research. The Waltz model of neorealism and the point of view of critics of Waltz in the book edited by Robert Keohane under the title "Neorealism and Critics" is the basis of this research. This research proceeds by examining the limitations raised by critics in the direction of explaining and solving them. Presenting the theoretical framework of the modified version of neorealism is a tool to investigate and achieve these goals. Clarifying the importance of these modifications for understanding the structural changes of the system is also one of the goals of this research.

The scope and limitation of the research: The focus of this research is on the structures of the international system as a whole. Therefore, it will not focus on other levels of analysis outside of this basis. The focus of this research is on the political sector of the structure of the system. In this research, we do not discuss other sectors such as societal, economic, or cultural sectors. In other words, the scope of this research is the defined boundaries of other social sciences and it does not enter the levels of analysis based on other social sciences.

This research bases its work on Waltz's theory of international politics. On the other hand, considering the point of view of critics of neo-realism, it seeks to create a modified theoretical framework and conceptual framework for this research. In this way, the point of view of the critics is to start modifying the original version of neorealism and apply it to explain the structural change in the international system. The reason for applying Waltz's theory is its structural point of view.

Significance and contribution: Cox, Ruggie, and Ashley emphasize the historical context and social forces. They do not consider the structure of the system and the structure of the interacting units as constituent parts of the international system and ignore the importance of these structures in structural change (Ashley, 1986; Cox, 1986; Ruggie, 1986). Buzan and others consider the political structure with other structures of the system (Buzan et al., 1993). Therefore, they ignore the boundaries of different fields of social sciences. Holsti emphasizes the institutional dimension of change. He considers ideas, norms, and institutions as components of structural change

(Holsti, 1998; Holsti & Holsti, 2004). Keohane emphasizes on institutions and information flow as a component of change. (Keohane, 1986b) Gilpin examines hegemonic war as a component of structural change and transformation. (Gilpin, 1981)

This research seeks a more complete and comprehensive plan to explain the structural change in the system. A conceptual and theoretical framework that includes all the structures of the international system as a whole based on the modified version of neorealism. This research is an attempt to get a complete picture of the structural change and its possibility in the structures of the international system. Therefore, while focusing on the structure of the system and the structure of the interacting units and the mutual relations of these structures, we will also focus on the process and the historical context.

II. METHODS AND MATERIALS

In data collection, this work is library based and has two theoretical and historical parts. The main sources for data collection are Waltz's publication "The Theory of International Politics" and the book edited by Robert Keohane "Neorealism and its critics." Further, we use other books, articles, and other resources related to the topic of structural change. We collect all data from online or library sources.

This study analyzes collected data through qualitative content analysis and theoretical analysis. We seek to analyze and identify the limitations of neorealism. Removing the limitations from this theory provides the ability to analyze and predict structural change. In this way, this research aims to present a modified version of neorealism by adding historical context and process to the structures of the international system.

The level of analysis in this research is structural. This research tries to investigate and explain the nature of change in the international system at the level of the system's structures. In addition, the purpose of this research is to investigate the feasibility of structural change in the international system. This research will plan and present a synthesized and modified theoretical framework in the way of theoretical data analysis. The intended theoretical framework is an attempt to explain the role of other parts of the international system in any structural change.

III. RESULTS: THE MAIN CONCEPTS OF WALTZIAN NEOREALISM AND ITS CRITICS

In this section, while reviewing the presentation of the conceptual model of Waltz's definition of the

international system and its components, a schematic model of the main concepts and the relationships between them related to each of the critics separately. By extracting these concepts, this research seeks to identify and remove the limitations of neorealism in explaining the structural change of the international system. First, we will start with Waltz's definition of the international system, and then we will examine Waltz's critics separately.

3-1. International system in waltz's theory of international politics

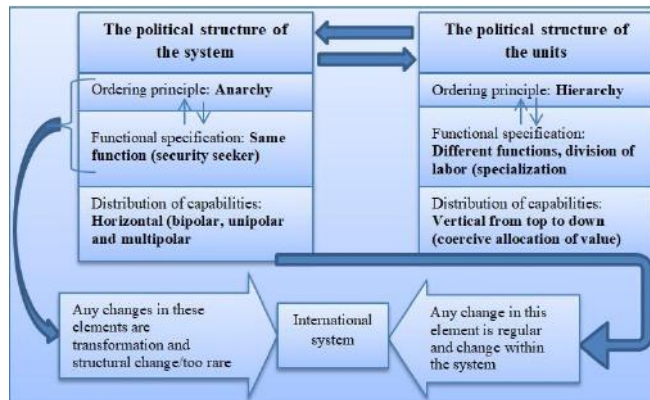


Fig.1: Schematic representation of waltz's theory of international politics "concepts and their relations"

Waltz's definition of the international system consists of two elements. These two elements include the system structure and interacting units. Figure one provides an overview of Waltz's definition. According to Waltz, each of the constituent elements of the system has a political structure consisting of three principles. These principles include the ordering principle, the functional specifications, and the distribution of capabilities. (Waltz, 1979, 2010)

In "domestic societies," Waltz explains, the ordering principle is "hierarchical." On the contrary, this principle is "anarchic" in the "international system." In domestic society, the hierarchical nature of governance differentiates the function of its subjects. On the other hand, in the political structure of the international system, the functions of the units are "similar" and not "different." In the distribution of capabilities, the more or less capabilities of units for a similar function are the case. Great powers are matters. The way to evaluate the power of a unit is by comparing the relational power of different units. On the other hand, in domestic societies, the distribution of capabilities is vertical and from top to down. In other words, in our internal societies, we are facing the coercive allocation of values. (Waltz, 1979, 2010)

Figure one show well that there are two sources of change in Waltz's model. In this model, he discuss two types of change. Changes in the first two principles of the Waltz model structure are very rare. If there is a change, it is a revolution and a structural transformation. The change in the third element of the structure of the Waltz model is of its usual and regular type. (Waltz, 1979, 2010)

3-2. Limitations of Waltzian neorealism raised by its critics

All of Waltz's critics believe that Waltz's international system theory has limitations. They seek a theory with a more comprehensive explanation of structure. Some of these critics point to another aspect of the structure other than its political aspect. Some explain the interpretation of social forces in the historical context and movements in international relations. They do not accept value-free explanations. Others are looking for the connection between the level of structural analysis of the Waltz system and the level of analysis of interacting units. (Waltz, 1979) In the following, we examine a summary of the points of view of the main critics of neorealism. Below, we made schematic model of the basic concepts of each of these critics. Each of these models presents the concepts and the relationship between them from the author's point of view. (Buzan et al., 1993)

3-2-1. John Ruggie point to neorealism

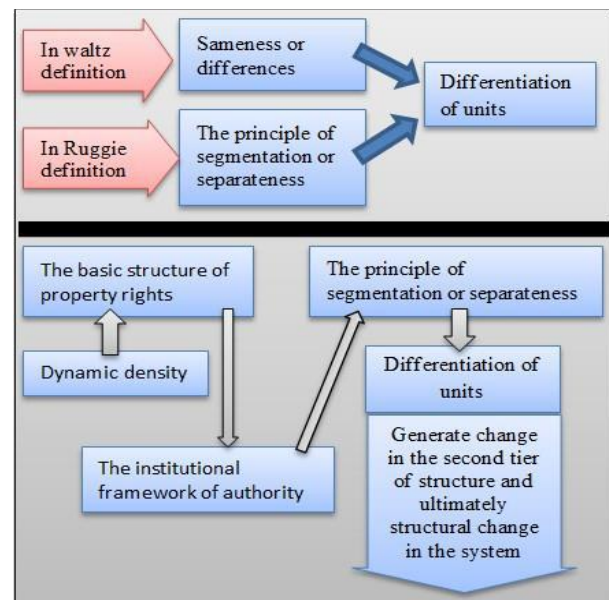


Fig.2: Schematic representation of john Ruggie point to neorealism

According to Ruggie, Waltz borrowed the concept of political structure from Durkheim. This structure in the main model consists of three analytical concepts. These three concepts consist of the ordering

principle, the functional specifications, and the distribution of capabilities. Ruggie states that Waltz do not provide a complete understanding of the concept of political structure and the most important part of this deficiency is the principle of differentiation. Waltz reduces the distinction of units to similarity or difference. To evaluate the units and distinguish them, he focuses on the relative power and ignores the attributive and absolute power. If Durkheim means the distinction of units, he refers to the principle of separation and division. In other words, Durkheim refers to the differentiation of units in such a way that they form parts of a whole in relation to each other. Therefore, any change in the principle of differentiation causes a change in the structure of the system and its transformation. Waltz has closed this section on any changes. The change of the feudal system to the modern system is the result of the change in this principle. Ruggie reiterates that constituent units separate from each other through "differentiation." (Ruggie, 1986)

Ruggie states that the above structure is a "generative structure." According to Ruggie, prestructured layer made by the deeper structure levels affects the structural levels of the surface. He further states that Durkheim's three principles of structure have causal priority as a deeper structural level. Deep structures are "generative" because they produce observable patterns of behavior throughout the system. (Ruggie, 1986)

Ruggie states that Waltz also ignores Durkheim's concept of dynamic density. This concept also determines the change. This concept refers to the three elements of quantity, velocity, and intensity of interactions. As the amount of these three elements increases, we will witness a change in the structure of the system. Globalization results from increased dynamic density. (Ruggie, 1986)

3-2-2. Robert Keohane points to neorealism

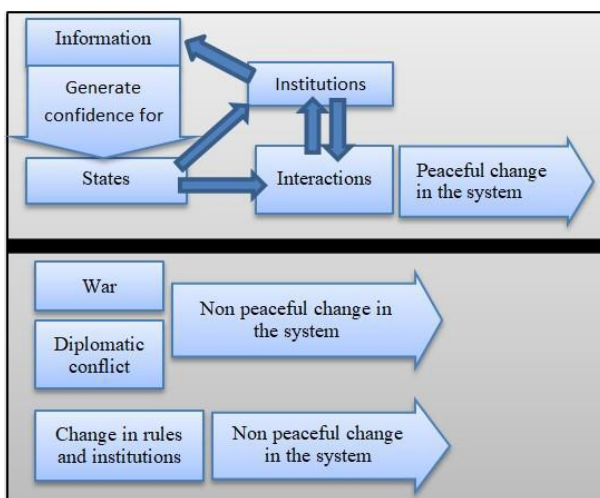


Fig.3: Schematic representation of Robert Keohane points to neorealism

The schematic model of Figure 3 presents a summary of Keohane's concepts and points of view regarding the limitations of neorealism and solutions to overcome these limitations. As shown in this figure, Keohane focuses on the imperfect flow of information in the international context and international institutions. He explains how incomplete information causes misunderstandings in states and non-peaceful change in the international system. He goes on to explain how information through international institutions can bring about peaceful change. Here, he introduces international institutions as an intermediary for extracting and providing perfect and complete information to states. (Keohane, 1986b)

According to Keohane, the three assumptions of neorealism are a good starting point. The first is its attention to a system-level theory focusing on a group of interacting units. The next assumption is that states behave rationally. In addition, the assumption that states try to influence other states. Emphasizing these assumptions, he presents his proposed model for structural research. First, while confirming the assumption that states are the main actors in the world, he focuses on the role of international institutions and non-state actors. Second, while confirming the assumption of rationality for states, he acknowledges the imperfect flow of information as a source of states misunderstanding. The third and last case is the assumption of power seeking and calculation of states in their interests. (Keohane, 1986a)

3-2-3. Robert Cox points to neorealism

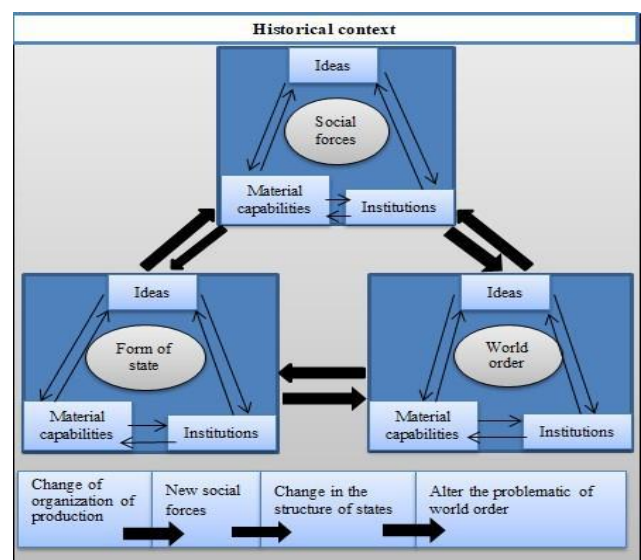


Fig.4: Schematic representations of Robert Cox point to neorealism

In the schematic model of Figure 4 presents Cox's definition of historical structures including three categories of forces. As this model shows, the forces in a structure interact. Among the material capabilities, we can mention industries and weapons, which are both productive and destructive. Ideas and institutions are also subsequent forces that reflect the prevailing power relations at their starting point. On the other hand, the historical structure does not reflect the whole world; rather, it indicates a specific field of human activities in its historical totality. (Cox, 1986)

Cox applies the method of historical structure in three levels or areas of activity. The first level of this structure is the organization of production, especially in relation to the social forces created by production. At the second level is the form of states. Finally, the third level is the world order or the specific combinations of forces that determine whether a group of states should run a war or peace. These three levels are interconnected. (Cox, 1986)

In the last part of the schematic model of Figure 4, it presents the effect of changes in the organization of production on the creation of social forces. As seen in this model, new social forces in turn create changes in the structure of states. Moreover, the spread of changes in the structure of states changes the problematic of world order. Social forces, forms of states, and world order are each independently composed of material capabilities, ideas, and institutions. Together, these elements represent a more complete profile of a historical context and process. All influence each other. (Cox, 1986)

According to Cox, neorealism reduces the ability of the state to the dimension of material capabilities. Moreover, it reduces the structure of the world system to the balance of power as a configuration of material capabilities. He goes on to say that neorealism generally rejects social forces as irrelevant to the international system. In addition, Waltz does not distinguish much between the forms of states. Neorealism also places little value on the normative and institutional aspects of world order. (Cox, 1986)

3-2-4. Richard Ashley points to neorealism

While criticizing the staticity of Waltz's neorealism, Richard Ashley criticizes the structure itself in this model as a fixed and unchanging structure. He goes on to say that, Waltz underestimates the importance of variation in time and space and emphasizes static rather than dynamic. The schematic model of Figure 5 is a summary of Ashley's criticisms and solutions to neorealism. Ashley points to Waltz's neglect of the agents and his exaggeration in explaining the structure. According to Ashley, Waltz's theory reduces the political leader to the

implementation of the limited rational logic that the system requires of him. According to Ashley, there is a mutual and productive effect between the agent and the structure. In the middle of the model in Figure 5, it shows the historical context and the mutual determination of the agent and the structure. In agents, the change in consciousness creates the motivation to change the structure. In the structure, changes in norms cause changes in restrictions and then agents. (Ashley, 1986)

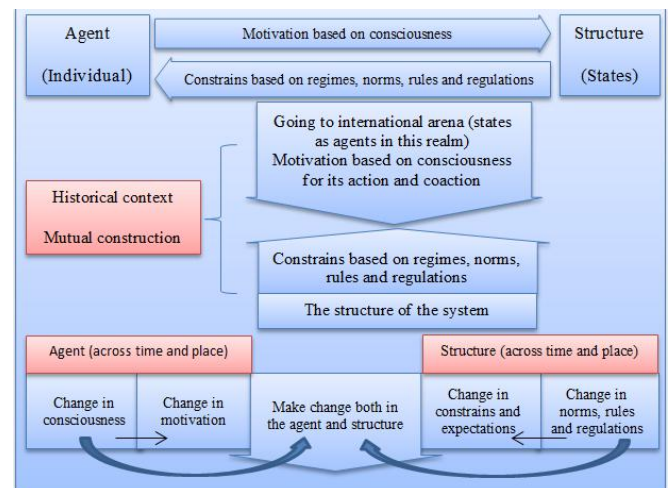


Fig.5: Schematic representation of Richard Ashley points to neorealism

Ashley reiterated that neorealist structuralism was silent on the four dimensions of history. First, it denies history as a movement and reduces history to a closed field. A predetermined structure determines the boundaries of history. Second, by denying the historical significance of practice (praxis), it accommodates all forms of historicism. Thirdly, despite the emphasis on power politics, neo-realism has no understanding of the social foundations of power. Social constraints deny power. In other words, Waltz fails to understand that the will is necessary for power. Finally, neorealism reduces politics to economic aspects under structural constraints. As a result, politics becomes nothing but technique. (Ashley, 1986)

3-2-4. Barry Buzan et al point to neorealism

The schematic model of figure six summarizes the point of view of Buzan and his colleagues. He and his colleagues define the international system in two ways. One is the Interhuman system and the other is the interstate system. In both of them, he adds new elements to Waltz's definition of the system. The extended concepts to the Waltz model are "distributive structure" and "deep structure." In inter-human systems, the actors of the system include individuals, non-governmental

organizations and states, and in the interstate system, states are present as interacting units. (Buzan et al., 1993)

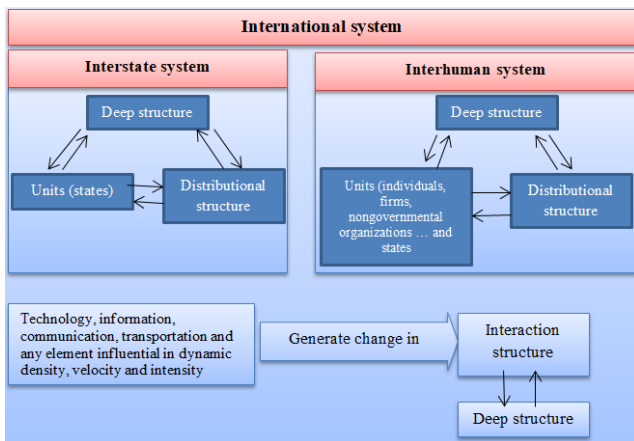


Fig.6: Schematic representation of Barry Buzan et al points to neorealism

They call the third element of Waltz's definition of structure "distributive structure." The distributive structure, like the first two elements of the Waltz model structure, does not have a mutual relationship with them. Any change in this sector usually occurs without any fundamental change in the international system. In other words, the change in power distribution from bipolar to multipolar or unipolar and vice versa has no effect on the fundamental structure of the system. The first two elements of Waltz's model of system's structure constitute the "deep structure." Waltz refers to the function of units in functional differentiation, but the differentiation of roles is also applicable at the unit level. (Buzan et al., 1993)

In the distribution of capabilities, Waltz's model focuses on "relational power." On the other hand, Buzan and his colleagues focus on "attributive power" or "absolute power." While rejecting attributive power, Waltz states that this type of power belongs to the level of units. While introducing "technology," "communication ability", "common norms" and "institutions" as "attributive power", Buzan and his colleagues state that these attributive powers have an impact both at the unit level and at the international level. "Interactive structure" focuses on attributional power or disaggregated forms of power. The interactive structure gives the theory the ability to observe any changes in this sector that have structural consequences in the international system. (Buzan et al., 1993)

Buzan and others consider the agents under the units as an intermediary between the structure of the system and the structure of the units. According to them, the agents of the interacting unit are facing a double and two-way security dilemma: one security dilemma comes

from the inside and another security dilemma comes from the outside, that is, from the international system. Separating power into its components is the first step in making changes. Separation of power increases the possibility of changing the structure of distribution. That is why; we will face different types of political, cultural, social, or technological polarization. (Buzan et al., 1993)

As mentioned above, according to Waltz, the functional distinguishing element of the anarchic structure is not open to change. Buzan and his colleagues believe that by opening this part of the structure of the Waltz model, the structural change caused by this part becomes possible. Therefore, this modification provides new opportunities for change not only in the context of an anarchic system with similar units, but also in the context of an anarchic system with dissimilar units and with different classifications of functional differentiation. (Buzan et al., 1993)

The addition of "interactional capacity" as a new level of analysis is the third aspect of the change. This change makes it possible for structural realism to meet the requirements of a complete systems theory. The capacity for interaction is sensitive to continuous technological, normative, and institutional changes; because instead of the relative weight of relational power, it relies on the absolute qualities of attributional power. (Buzan et al., 1993)

3-3.The dynamic of change from a different perspective

In this section, we examine some works related to the issue of change in the international system are examined with a structural approach. As in the previous section, we present the concepts of each expert in the form of a schematic model. The presented models present the main concepts, their relationships, and their impact on structural change in the international system. Robert Gilpin, KJ Holsti, and Jeffrey L. Herrera are selected experts who present the discussion of structural change in the international system. The logic of choosing the above thinkers is their macro and structural view of the theory of international relations and the issue of change.

3-3-1. Robert Gilpin's explanation of the international system and change

The schematic model of figure seven presents Robert Gilpin's main points of view and concepts. He introduces an international system consisting of three main components. The first part is that the international system consists of different entities. Among these entities, states are the most important actors in the international system. Then, he continues that other transnational or international actors like institutions may have an important role to play. The second component of his definition is regular

interaction in the international system. The nature, frequency, and intensity of interactions are different depending on the international system. The third and last component of his definition of the system is the type of control. Anarchy is a state, but the degree of control depends on three things. The distribution of power between governments is the first. The second item is the hierarchy of prestige. Finally, the third case is a set of laws and rules that regulate or at least affect how governments interact. (Gilpin, 1981)

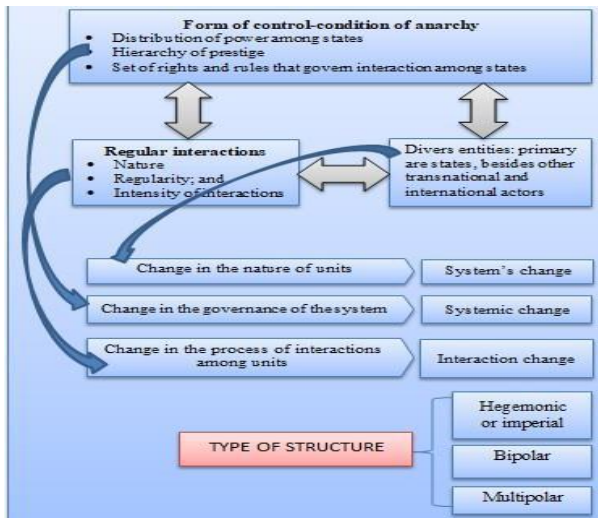


Fig.7: Schematic of Robert Gilpin's explanation of the international system and change

As shown in figure seven, Gilpin introduces three types of structures. These structures include imperial or hegemonic structure, bipolar structure and multipolar structure. In the following, he describes three types of changes: 1. Systems: changes in the characteristics of system actors. 2. Systemic: change in the way a system is controlled. 3. Interaction is the change in the regular processes or interactions of a system. According to Gilpin, change can be gradual or revolutionary. (Gilpin, 1981)

3-3-2. K.J Holsti's discussion of the problem of change in the international system

Figure eight provides a summary of Holsti's views on change in the international system. Holsti discusses four indicators of change. These indicators include major events, trends, the structure of the international system and international institutions. He mentions the end of the Cold War as a great event. In his opinion, globalization is an example of a trend-based transformation. Holsti states that the change in the structure of the international system makes the change in power relations between the main actors. In his opinion, change in international institutions is another indicator of change in the system. (Holsti, 1998)

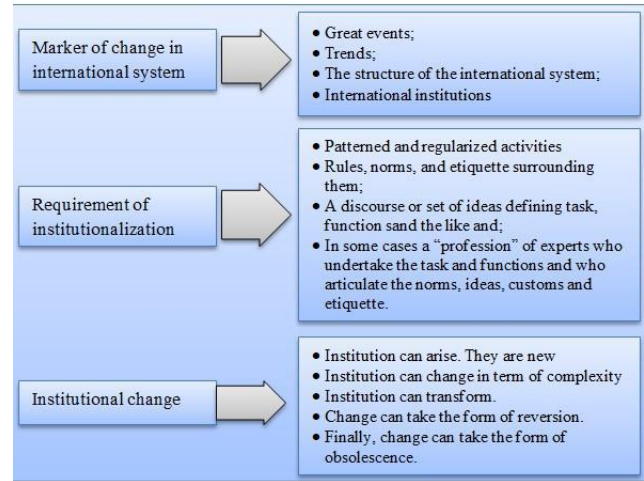


Fig.8: Schematic representation of K.J Holsti about the problem of change in international relations

According to Holsti, four conditions are necessary for institutionalization. The first condition is "patterned and regular" activities. The second condition he wants is the norms, laws, and customs surrounding them. The third condition presented is discourse or a set of ideas that define things like tasks, functions, and features. Finally, the "professional" work of experts who have responsibility and create norms, ideas, customs, and manners is the final precondition he presents for institutional change. (Holsti, 1998)

Finally, as shown in Figure 8, he explains about institutional change. In his opinion, institutions can change in several ways. The first way of change is that institutions may emerge as new mechanisms. In the late 18th century, diplomacy was a new institution in Europe. The second way of institutional change is change in terms of complexity. This change in practices, beliefs, laws, and customs is not fundamental. Instead, it changes the number of activities and agents and the tasks they perform. The third way of change is institutional transformation. This means changes in their basic functions, activities, and rules. While some of their basic features may remain. Monarchy is a good example. The next way of institutional change is reversion. This change occurs when new practices, norms, rules, and ideas revert to forms that are more "primitive." Deinstitutionalization process will be part of this. The last way of institutional change is obsolescence. It is possible that a global institution is already obsolete or about to disappear. According to Holsti, colonialism in its institutional form is no longer alive. The above five possibilities do not occur in the same direction. Every institution has its own history. (Holsti, 1998)

According to Holsti, there are two types of institutions. These two types include procedural institutions such as diplomacy and fundamental institutions such as the state sovereignty system. Fundamental institutions give personality to certain actors and give them a special place. They also define the basic principles, guidelines, and standards governing their mutual relations. In the end, they lead to patterns of action in many ways. Territorial sovereignty, states, and things like that are fundamental institutions of the Westphalian international system. Procedural institutions are practices, ideas, and norms that regulate interactions between individual actors. These institutions address questions about how we treat each other in normal conflicts and interactions. Compared to the fundamental institutions, they are of secondary importance. Dissolving a procedural institution such as war has no effect on fundamental institutions. (Holsti, 1998)

3-3-3. Herrera's discussion of the problem of change in the international system

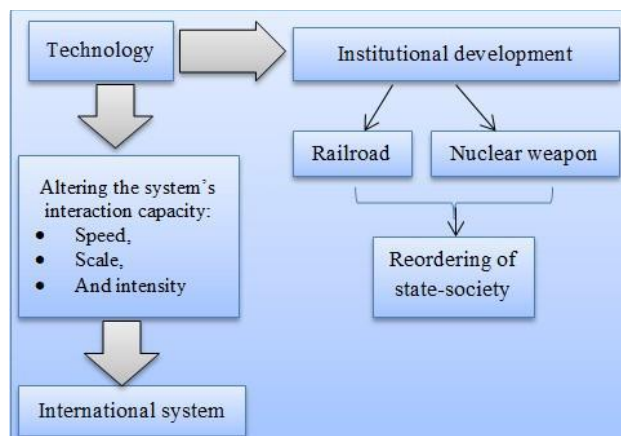


Fig.9: Schematic of Geoffrey I. Herrera's discussion of the problem of change in the international system

The schematic model of Figure 9 provides a summary of the main concepts and relationships between them from Jeffrey I Herrera's point of view. According to Herrera, a satisfactory theory of international relations needs logic of change. He states that the logic behind this need is the historical nature of the international system. Herrera emphasizes that technology should be embedded as a component of change in the theory of international relations. He states that societies undergo institutional changes by adopting technology. In this regard, he points to the railroads and nuclear weapons and their impact on redefining the relations between the state and the nation as an institutional consequence. Therefore, Herrera emphasizes more on the institutional and political aspects of technology than on its technical aspects. Herrera explains how the organizational differences of each of

these technologies in different countries lead to different outcomes. (Herrera, 2012)

According to Herrera, technology entered to all aspects of life in the international environment. In other words, big technologies, while expanding in societies, attach into international structures. In a sense, technology has become a defining part of the structure. He continues to state that technology leads to a change in the "capacity of interaction" in the international system. The speed, scale, and intensity of interactions between states are components of interaction capacity. Herrera explains that the international system based on the communication of the World Wide Web is different from the international system based on the communication of horses and primitive boats. (Herrera, 2012)

IV. DISCUSSION

The first issue of this research, as stated at the beginning, is to achieve a modified conceptual framework of neo-realism with the ability to explain how the change occurs in the structures of the international system as a whole. In other words, the primary goal of this research is to identify the factors affecting the structural change in the international system in order to design the above-mentioned conceptual framework. In this regard, identifying and examining the limitations of neorealism to explain structural changes in the international system, considering the neorealism of Waltz's model and the viewpoints of his critics is another issue that this research is trying to achieve.

In the previous section, the schematic models represent the main concepts and relationships between them of waltz and his critics one by one. We extract the concepts mentioned in each of the schematic models based on the original text of the book theory of international politics by Kenneth Waltz and the original text of the book Neorealism and its critics edited by Robert keohane. We used some other literature related to experts who have written under the title of change in the international system with emphasis on the macro theory of international relations. We extract the main concepts of these theorists and present them in the form of a schematic model.

Based on waltz's definition of the international system, the two main concepts are the structure of the system and interacting units, or in other words, states. Waltz did not consider a place for process in his definition and referred to it as the attributives of units, which has no effect on international outputs. In other words, according to Waltz's belief, absolute power only has an effect at the level of units and has no role at the level of the structure. Waltz considers each of the components of the

international system to have an independent political structure. The political structure of both the international system and interacting units have three components including ordering principles, functional specification, and distribution of capabilities.

In the discussion of change, Waltz states that the structure of the system in the first two elements has inverse relationship to the political structure of interacting units. In other words, while the international system's structure is anarchic in ordering principle, it is hierarchical in interacting units. Functional specifications as second principle in the international system under anarchy and security dilemma refer to same functions. At the other hand, this function in the units under prepared security and hierarchical authority from top to down, refer to specialization and different functions. Therefore, any change in the first two elements has a revolutionary effect and complete transformation in both components of the system. Waltz states that changes in these two elements are very rare due to the above reasons. What remains open to change in Waltz's definition is the third element or the distribution of capabilities. In this section, the relative or relational power is the subject of discussion, which is also an indicator for evaluating the power of the states or interacting units.

The first and almost the most important problem with Waltz's model is that the first two elements are "closed" to change. In this section, we can mention the constructive criticism of John Ruggie. As Ruggie states, regarding the functional specifications, Waltz has a misunderstanding and instead of considering the principle of separation and segregation of units and the linking index of units in a whole, he focuses on the difference and similarity of function. Therefore, Waltz simply closed this section on any changes. If considering the principle of differentiation and segregation, this principle will be the subject of change. The type of society structure in the feudal system with the society structure in the modern Westphalian system is a good example for this change. The change in property rights from its feudal form to private property rights led to a structural change in the feudal system and its transformation into a modern system. By expanding this discussion, it is possible to explain the change from the modern system to the post-modern system.

In the discussion of the ordering principle, Barry Buzan and his colleagues provide constructive comments. According to their belief, the ordering principle can be subject to change both in the structure of interacting units and in structure of the international system. Buzan and his colleagues propose a different degree of anarchy between

the negative and positive limits of the X-axis. Therefore, international systems can be different depending on the intensity or weakness of the level of anarchy. Considering this tolerance, interacting units can also differ in the degree of hierarchical governance. Therefore, the interacting unit can play the role of intermediary between the international system and the agents within interacting units. With this assumption, there is a double dilemma for the interacting unit. The security dilemma from within and the security dilemma caused by the structure of the system are the double security dilemma.

Ashley and Robert Cox focus on process and the historical context. Ashley states that Waltz ignores the social origin of power and does not pay attention to the social recognition of power. Like Buzan and others, he focuses on different layers of power and the effect of paying attention to these layers on structural change in the international system. On the other hand, Cox focuses on social forces and their impact on the structure of states and the international system. According to Cox, Waltz has neglected the two elements of ideas and institutions by focusing on material capabilities. He states that these three elements, i.e., idea, institution, and material capability, interact with each other and play a role in the structure of social forces, forms of states, and the international order problematic. This is how changes in these three elements cause changes in social forces. Changes in social forces also lead to changes in forms of states and ultimately changes in the international order problematic.

Robert Keohane focuses on international institutions and information flow. He proposes change in two ways, peaceful and non-peaceful. Peaceful change occurs following the perfect flow of information and the intermediary role of institutions to provide this information to states. On the other hand, non-peaceful change is the result of imperfect information flow, diplomatic disputes, and changes in norms and rules in institutions. K.J. Holsti and Jeffrey L. Herrera both focus on international institutions and the institutionalization of ideas. While emphasizing institutional change as the factor of change in the system, Holsti introduces two types of institutions. Fundamental institutions will lead to structural change, such as Westphalian's institution of sovereignty. The second type is the procedural institutions, which does not have a significant effect on structural change in the international system. The institution of war is a procedural institution, the elimination of which has no effect on the international system. Herrera also deals with the role of technology in the institution and its impact on the change of the international system by examining the two technologies of railroads and nuclear weapons. He discusses the role of these two technologies in redefining

the relationship between the states and the society. Herrera also states that technology has become a part of social life with its ever-increasing expansion and became an influential element in the theory of international relations. He explains the impact of technology on the capacity of interaction, which includes the three elements of speed, scale, and intensity of interactions between states. According to him, the international system based on internet communication is different and distinct from the international system based on horsepower communication.

Robert Gilpin defines the international system as consisting of three components, different entities, order, and form of control. According to him, the degree of control in the system depends on three factors: distribution of power, hierarchy of prestige, and a set of rights and laws that affect how governments interact. The structures of Gilpin's model include the imperial or hegemonic structure, bipolar structure and multipolar structure. He proposes three types of changes for the international system. The first type of modification is the change in the characteristics of the actors of the system. Another type of change that Gilpin wants is a change in the way of implementation or control in an international system. According to him, the third type of change is changes in interactions or regular processes of an international system. His first type of change is within the second element of Waltz's model of structure. The second type of Gilpin's definition refers to the ordering principle and the first element of Waltz's model, and the last type focuses on process, which have no place in Waltz's definition.

As mentioned above, Waltz rejects any possibility of change in the first two components of the structure. At the same time, he denies the historical background and social foundation of the change of power. He also reduces attributive power to the level of units. In order to overcome these limitations and achieve the ability to explain and predict structural change in the international system, we explain and present the conceptual model of this research with the previous concepts of the main theory, critics, and other experts studied.

The schematic model of Figure 11 shows the main concepts and the relationships between them in the international system of the modified model of this research of neorealism. In the modified model of the research, the international system consists of three components including political structures of the system, the political structure of the units and the political structure of the international process. The obvious change in this modified model is the adding up of the structure of the process. In this way, we discuss the historical background and process as a source of influence on structural change in the

international system. These structures have a two-way relationship and influence on each other. The schematic model below shows the elements that make up the structure of the process.

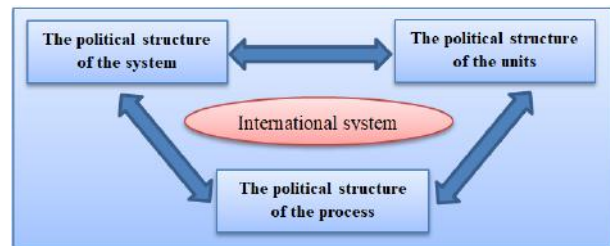


Fig.10: Schematic representation of the international system from the modified version of neorealism

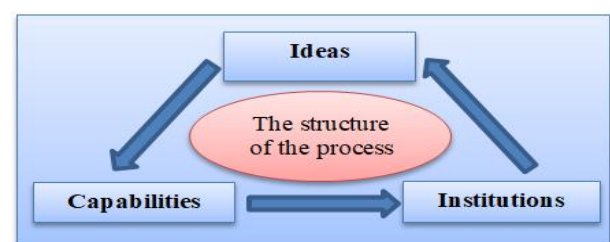


Fig.11: Schematic representation of the political structure of the process based on a modified version of neorealism

As the schematic model of Figure 12 shows, the structure of the process consists of three elements including ideas, capabilities, and institutions. These elements are also interconnected. Every new idea takes hold through institutionalization and creates new capabilities. Since this research emphasizes the main assumptions of neo-realism, including the priority of states as interacting units, this structure apply only in the field of state's interactions. From this point of view, we can pay attention to issues such as technology, terrorism, responsibility to protection, or humanitarian interventions in the form of ideas that have passed the way of institutionalization and have acquired productive or destructive capabilities. Of course, we will deal with these issues by focusing on the states and the macro-discussion of international relations theory. In the following, due to the similarity of the structure of the units and the structure of the international system, we draw the schematic model of Figure 13 both for the interacting units and for the structures.

In this model, like the Waltz model, the political structure consists of three elements: the ordering principle, functional specifications, and distribution of capabilities. The modified model of the research, despite its apparent similarity to Waltz's model, is qualitatively different from this model. The first difference is in the way of looking at the ordering principle of the international system or the

interacting unit. In the figure below, we offer the perspective of the research on the ordering principle.

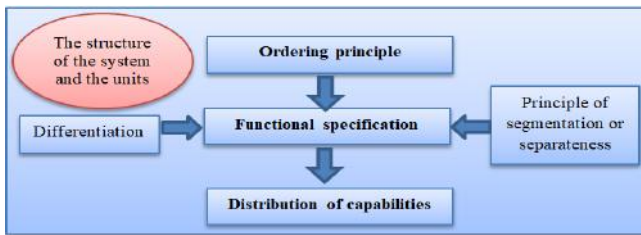


Fig.12: Schematic representation of the structure of the interacting units and system

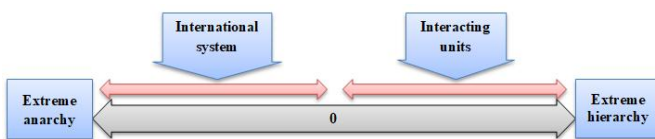


Fig.14: Schematic model of the ordering principle from the research modified perspective

Waltz observes this principle both in the international system and in interacting units in its absolute limit, i.e. extreme anarchy and extreme hierarchy. On the other hand, Waltz considers the inverse relationship between this principle in interacting units and the international system. Therefore, the possibility of changing this principle is unlikely and if any happen, is a revolutionary event. However, in this Research model as shown in the above schematic model, there is a range of fluctuation between these two limits. In fact, both in the interacting units and in the international system, on the x-axis of the vector, there is a possibility of change between extreme anarchy and extreme hierarchy. In domestic sphere, in the Westphalian system, this fluctuation is between zero and extreme hierarchy, and in the international system, between zero and extreme anarchy. Now, this assumption also opens the possibility of structural change from the origin of the ordering principle to the international system of the modified model of this research.

Taking into account the fluctuation in ordering principle, the security dilemma is no longer specific to the international system and this leads to security dilemma in interacting units too. Therefore, the basis of functional specifications as the second element of the structure of both the system and interacting units cannot be the issue of security. With this assumption, the issue of similarity and difference is not the matter in this section. Considering these cases, the next point of departure is the principle of differentiation as a configuration of interacting units in the system as a whole. As a result, it opens the principle of

functional specifications to change both in interacting units and in the international system. This opening allows the structural change based on the origin of this element. A clear example of this kind of change is the change in the type of configuration of societies in the feudal system based on overlapping ownership to societies based on private ownership, which led to the change of the system from feudalism to the modern international system.

V. CONCLUSION

The aim of this research is to access a framework for explaining and predicting structural change in the international system. For this purpose, we examine the theory of neorealism as a theoretical foundation. In order to identify and solve the existing limitations in Waltz's model of neorealism, this research observes the published literature relating to his critics. Regarding the issue of structural change in the international system, we also observe the points of view of some other experts and extract their main concepts. By summarizing all the reviewed opinions and the main concepts of Waltz's neorealism, we offer a model and present the synthesized conceptual framework of this research. In the following, we give a summary of these cases.

In the definition of international system based on research model, we add the structure of process to Waltz's definition. Therefore, the international system based on research model consists of three political structures including the structure of the units, the political structure of the system and the political structure of the process. In the research literature, the only case that tried to present an alternative model was Barry Buzan and his colleagues who made the changes in the Waltz model as follows. First, they transformed the political structure of Waltz's model into two structure including deep structures consist of the first two elements of Waltz model and a distributive structure consist of the third element of Waltz model, and then presented a new interactive structure resulting from the view of attributive and absolute power. Another change they wanted, which was the result of the division of power into its components, led to the emergence of a vertical level of analysis consisting of social, security, political and cultural layers, which is a way of crossing the border of different knowledge of social sciences. The difference between the synthesized model of this research and the model of Buzan and his colleagues is that in this research model, the overall structure of the Waltz model remains intact and the only addition to it is the structure of process. Another difference is that in the synthesized research model, the focus is on the political structure, and other structures raised in Buzan model, are not the subject

of this research. Of course, we made our modifications in the political structure in terms of quality and concept. The first adjustment is in ordering principle and consideration of fluctuation for it both in the units and in the international system. The second adjustment is in the functional specifications, which instead of focusing on similarities and differences, focuses on the principle of differentiation and separation, which is the basis of the configuration of both units and the international system.

In this research, it was not possible to review the entire literature related to the change in the system, and we analyze only those works that have a macro perspective in the theory of international relations and have a structural perspective. This research focuses on theory and is not a case study. Focusing on the historical background and process as a new structure provides a new horizon for explaining and predicting future structural changes in the international system.

Therefore, in this research, there was not an opportunity to conduct a case study and to examine this modified version of neorealism in its practical context. Our next effort is to conduct a case study and examine the research-modified version of theory in an independent research project.

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REFERENCES

- [1] Ashley, R. (1986). The Poverty of Neorealism. In K. Robert O (Ed.), *Neo-Realism and its Critics*. Columbia UP.
- [2] Buzan, B., Jones, C. A., Little, R., & Richard, L. (1993). *The Logic of Anarchy: Neorealism to Structural Realism*. Columbia University Press.
<https://books.google.com/books?id=qLVWxnZwsCYC>

- [3] Cox, M., Dunne, T., & Booth, K. (2001). Empires, systems and states: great transformations in international politics. *Review of International Studies*, 27(5), 1-15.
<https://doi.org/10.1017/S0260210501008002>
- [4] Cox, R. (1986). States and World Orders: Beyond International Relations Theory. In K. Robert O (Ed.), *Neo-Realism and its Critics* (pp. 158-204). Columbia UP.
- [5] Gilpin, R. (1981). *War and Change in World Politics*. Cambridge University Press.
<https://books.google.com/books?id=2iKL7zr3kl0C>
- [6] Herrera, G. L. (2012). *Technology and International Transformation: The Railroad, the Atom Bomb, and the Politics of Technological Change*. State University of New York Press.
https://books.google.com/books?id=rVtquMX_hCUC
- [7] Holsti, K. J. (1998). The Problem of Change in International Relations Theory. *Institute of International Relations*, 26.
- [8] Holsti, K. J., & Holsti, K. J. (2004). *Taming the Sovereigns: Institutional Change in International Politics*. Cambridge University Press.
<https://books.google.com/books?id=Jh6gjr-2ho8C>
- [9] Keohane, R. O. (Ed.). (1986a). *Neorealism and Its Critics*. Columbia University Press.
- [10] Keohane, R. O. (1986b). Theory of World Politics: Structural Realism and Beyond. In K. Robert O (Ed.), *Neo-Realism and its Critics* (pp. 158-204). Columbia UP.
- [11] Koslowski, R., & Kratochwil, F. V. (1994). Understanding change in international politics: the Soviet empire's demise and the international system. *International Organization*, 48(2), 215-247.
<https://doi.org/10.1017/S0020818300028174>
- [12] Kurki, M., & Wight, C. (2013). *International Relations and Social Science*.
- [13] Quinn, R., & Gibson, B. (2017). *An Analysis of Kenneth Waltz's Theory of International Politics*. Macat Library.
<https://books.google.com/books?id=-EkrDwAAQBAJ>
- [14] Rosenau, J. N. (1990). *Turbulence in World Politics: A Theory of Change and Continuity*.
- [15] Rosenau, J. N., & N, R. J. (1997). *Along the Domestic-Foreign Frontier: Exploring Governance in a Turbulent World*. Cambridge University Press.
<https://books.google.com/books?id=eTKi5qzuLIYC>
- [16] Ruggie, J. (1986). Continuity and Transformation in the World Polity: Toward a Neo-Realist Synthesis. In K. Robert O (Ed.), *Neo-Realism and its Critics* (pp. 134-148). Columbia UP.
- [17] Sakamoto, Y. (1994). *Global Transformation: Challenges to the State System*. United Nations University Press.
<https://books.google.com/books?id=C8aPAAAAMAAJ>
- [18] Waltz, K. N. (1979). *Theory of International Politics*. McGraw-Hill.
<https://books.google.com/books?id=j6qOAAAAMAAJ>
- [19] Waltz, K. N. (2010). *Theory of International Politics*. Waveland Press.
<https://books.google.com/books?id=OaMfAAAAQBAJ>