



**International
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THESES OF THE PhD DISSERTATION

of

Kinga Szálkai

Water Distribution Issues in the Theory of International Relations:

**Water Conflicts and Cooperation in Central Asia at the Beginning of the
21st Century**

Supervisors:

Dr. Mihály Dobrovits, PhD

Program director, Center for Security and Defence Studies

Dr. Péter Marton, PhD

Senior lecturer, Corvinus University of Budapest

Budapest, 2016

Institute of International Relations

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1. Research History and Justification of Topic

It is now more widely believed that fresh water can become the primary resource of the 21st century, particularly when it comes to the development of international relations. The distribution of transboundary waters¹ has been crucially important since the beginning of time. It is well exemplified, among others, in *Water Conflict Chronology*, a compilation by Peter H. Gleick et al. on the peculiarities of more than 200 water-distribution-related conflicts (Gleick [2008]), or in *Transboundary Freshwater Dispute Database* edited by Aaron T. Wolf that gathers data on water management partnerships and the history of regimes to facilitate international cooperation on transboundary waters (Wolf [2013]).

It is therefore no coincidence that analysing water distribution cases, with special regard to the effects of transboundary waters on the cooperation and conflicts of states affected, forms an integral part of the discipline of International Relations. There are 263 rivers, lakes and catchment basins worldwide that run cross-border. This involves around half of the mainland areas of Earth and 60% of the world's fresh water resources, as well as engages 145 states (around three quarters of the world) in the discussions about water distribution (UN [2013]). There are 30 states completely covered by such territories. Approximately 40% of the world's population lives in catchment basins crossing two or more

¹ In my research, I use the definition on transboundary watercourses provided in the international agreement, "Convention on the Protection and Use of Transboundary Watercourses and International Lakes," which explains that "'Transboundary waters" means any surface or ground waters which mark, cross or are located on boundaries between two or more States."

countries, while 90% live in countries having transboundary catchment basins (UN-Water [2008], p. 1).

Due to population growth, lifestyle changes, ineffective water use, water pollution, as well as climate change, the quantity of water available per capita is gradually decreasing which will lead to new challenges in interstate relations related to water distribution. Many reports have forecast the probable effects of water scarcity; its serious consequences have already started becoming visible. According to UN estimations, water consumption will increase with 18% in developed countries by 2025, while in developing countries with 50%. By that time, 1.8 billion people will live in absolute water scarcity, meaning that even satisfying their basic needs will cause difficulties. In addition, two thirds of the people worldwide will be pressured about access to water (UN-Water [2013b]). According to the 2030 Water Resources Group, which was jointly created by a number of international companies, water needs globally will exceed the quantity of resources available with 40% by 2030 (2030 Water Resources Group [2009], p. 41).

Water crises can cause serious problems in the 21st century that can affect the development of international relations. It does not mean, however, that water supplies are insufficient to sustain the world's population, it rather indicates that significant measures should be taken worldwide in the fields of water use, water management and water distribution for the sake of its prevention. Towards this goal, long-term strategies on all levels including the global, regional, national and local shall be developed, where cooperation with decision-makers is essential. Science can positively affect decision-makers. Thus, hydropolitical theories can directly contribute to tackling and solving water challenges. In accordance, examining the root of water conflicts and transboundary water-related cooperation has practical relevance to the development of international relations; their analyses could serve as a key target area of the discipline of International Relations. The current research intends to contribute to this target area, more precisely to the examination of the origin of water-related international conflicts and cooperation.

2. Methods Used

My research is founded on the hypothesis that changes in interstate relations related to water distribution are shaped by water security discourses which are either related to the changes of the hydrological and political-economic-social context or in several cases have their own dynamics. Therefore, the constructivist approach gains added value over static hydropolitical

theories when it comes to their analysis. Accordingly, my argument is that the hydrological and political-economic-social context, as well as the water security discourses that provide explanation and render meaning to it influence as independent variable the dependent variable of interstate relations related to water distribution. I make the assumption that water-related issues cannot be fully understood without the knowledge of the concrete political, economic and social relations. The dynamically-changing water security discourses appear as intermediates of these contextual effects. Furthermore, as in several cases they are not directly attached to political-economic-social conditions, they can be considered as independent variables, also capable of influencing elements of the context.

The above-mentioned hypothesis is supported by four sub-hypotheses in my work.

1. My first sub-hypothesis (H1) is that rationalist theories of material and static character, such as neo-realism and neo-liberalism, are unable to provide a comprehensive analysis of the diversity of interstate relations related to water distribution.
2. As per the second sub-hypothesis (H2), constructivism offers sufficient founding principles and tool set for examining interstate relations related to water distribution, thereby supplementing shortcomings of neo-realism and neo-liberalism.
3. The third sub-hypothesis (H3) is based on the preconceived idea that developing water security discourses are either intermediates in the political-economic-social context, or they can appear as independent variables through the dynamics of the meanings rendered.
4. As part of my fourth sub-hypothesis, I make the assumption that the changes of water security discourses can influence and shape interstate relations related to water distribution. Therefore, their starting point is different from that of the theories of material and static character, thereby providing a set of tools capable of not only examining the diversity of interstate relations related to water distribution but handling, relieving and solving crises. The demonstration of this assumption leads me back to the starting point that rational theories of material and static character (neo-realism, neo-liberalism) are unable to provide a comprehensive analysis of interstate relations related to water distribution. Therefore, the constructivist approach capable of analysing the discourses in question has an added value.

In my dissertation, I apply deductive methods. Therefore, I formulate my hypotheses relying on theoretical literature, proving or dismissing them in the end through a given case study.

Through connecting spheres of science such as geography, hydrology², hydropolitics³, ethnography⁴, international law, security policy and history, I apply a multidisciplinary approach in my research. The basic multitude of the research and the basis of the examination is the sum total of water security discourses between downstream and upstream state pairs (dyads). The research is based on the analysis of two comparative case studies on changing contexts and water security discourses related to water distribution between downstream and upstream countries (dyads): the Rogun Dam / the dyad of Tajikistan and Uzbekistan and the Kambar-ata 1 Dam / the dyad of Kyrgyzstan and Kazakhstan. In addition to dyads, it is key to the research to examine the catchment basin of the Aral Sea to receive as accurate results as possible. The states to be found in the above-mentioned region can be considered as a hydropolitical security complex, meaning that water-related issues are so tightly connected that numerous problems can only be interpreted on the regional level.

The unit of analysis is the total number of the documents connected to the selected case studies (data bases, statistics, political documents and statements, international agreements, ethnographies, publicity materials and scientific papers), which help define the development of water security contexts and discourses.

Through three different constructivist tools of methodology, the research aims to reveal the explanatory power of constructivism and its added value in the analysis of the diversity of interstate relations related to water distribution. The first method is ethnographic research that reveals and depicts the distinctive political, economic and social contexts of certain cases examined through thick descriptions characteristic of constructivism. It becomes apparent then that the context influences the diversity of interstate relations related to water distribution mainly indirectly through discourses analysed with constructivist tools; it is the meanings rendered socially and inter-subjectively to water supplies that determines what direction the discourses take.

² Hydrology is the scientific study of the waters of Earth. See the official webpage of the General Directorate of Water Management. URL: <http://www.ovf.hu/hu/hidrologia>, retrieved on 2 October 2015.

³ Hydropolitics is “the systematic study of conflict and cooperation between states over water resources that transcend international borders.” (Elhance [1999], p. 3).

⁴ Ethnography “is an approach to the study of people in everyday life with particular attention to culture, that is, to the process through which people make (and sometimes impose or contest) meaning.” (Anderson-Levitt [2006], p. 279).

The second method is comparative process tracing, which aims to scientifically discover and analyse cause and effect relations through comparison of different time periods and areas. This method is used to investigate the securitisation process of water-related issues. There are three periods in which the dissertation examines security-related meanings rendered to water supplies along the lines of downstream and upstream fault lines determining the case of Central Asia in general and the dyads under analysis in particular: the Soviet era from 1960 to 1990, the cooperation period from 1991 to 1999, and the 2000s with ever growing tensions. This way, the securitisation process is connected with the sectoral classification of the then-dominant understandings of security.

With the help of this method, I exemplify that the political-economic-social context can also influence the development of the securitisation process and the development of conflicts and cooperation through the meanings rendered to water supplies. Furthermore, the case study enables me to illustrate that discourses can in themselves function as independent variables irrespective of the context, shaping interstate relation related to water distribution differently.

The first two methods therefore underline that the political-economic-social context influence the diversity of interstate relations related to water distribution through water security discourses through socially-constructed meanings, and that security discourses are able to lead to the same outcome as independent variables as well. However, the question may arise whether meanings are rendered at all when it comes to the discourses. Do these processes truly occur? If so, how can the development of water security discourses be examined? The aim of the third method is to prove that the development of water security discourses can be examined directly and their reconstruction reinforces processes introduced via the ethnographic research and comparative process tracing. Thus, the third method is content analysis where, by looking at primary mediatory tools of the discourse, I prove the statements outlined above within the time periods designated herein through international legal documents, scientific papers, as well as publicity materials in English compiled by Central Asian news agencies. Comparing the three different types of sources will enable me to determine whether the analysed documents record a conflict or cooperation-enhancing discourse on the interstate relations related to the water security of the states in question.

The research does not involve collection of primary data. The analyses are based on desk research in already-existing data bases, statistics, political documents and statements, ethnographies, international law documents, scientific papers, as well as publicity materials. This provides the opportunity to assess the connection between water security discourses as

well as the hydrological and political-economic-social context in the given time periods. In addition, the content of the above-mentioned documents are examined, thereby reconstructing water security discourses of the periods in question and their relation to the hydrological and political-economic-social context.

The case studies included were selected on the basis of expert sample, taking into consideration the aims and the hypothesis of the research. I was careful to choose such cases which reflect on the correlation of the changes of the political-economic-social context, the development of water security discourses, as well as the dynamics of interstate conflict and cooperation in the 20th century and the beginning of the 21st century. The *Transboundary Freshwater Dispute Database* edited by Aaron T. Wolf also provided assistance in identifying dyads best conforming to all criteria. Having the hypothesis of my research in mind, I selected two case studies, taking care they share similar attributes in terms of hydrology, politics, economics and society but differ in the direction of water security discourse, namely conflict or cooperation, so as to be able to present the refutation of both of the static theories. The two case studies selected therefore include the Rogun Dam (the dyad of Tajikistan and Uzbekistan, Amu Darya, conflict) and the Kamar-ata 1. Dam (the dyad of Kyrgyzstan and Kazakhstan, Syr Darya, cooperation). The dyads mentioned above are members of the Central Asian hydropolitical security complex.⁵ For this reason, offering a general overview of water processes in the region becomes essential in providing a sufficient analysis. The time horizon of the analysis is cross-sectional spanning from 1 January 1960 to 31 December 2010, with an additional chapter until 15 August 2016 in case of the discourse analysis, and is complemented by a historical overview crucial to a full understanding.

3. Results of Dissertation

Before going into detail about the hypotheses and drawing due conclusions, a brief summary of the structure of the dissertation is in order. The aim of the first chapter of the dissertation was to provide an overview of the justification of topic and the methodological principles used herein. The second chapter in turn served the purpose of presenting and analysing water-related areas of the discipline of International Relations. Subchapter 2.1. provided a practical summary of the current situation underlining that population growth, lifestyle changes,

⁵ Turkmenistan, the fifth state of the Central Asian hydropolitical complex, is not included in my research. The state pursues a very inward-turning and isolationist policy that hinders the acquisition of reliable information on their stance on water issues.

ineffective water use, water pollution, as well as climate change can cause water security to become one of the most significant challenges of the 21st century in terms of international relations. Therefore, a framework capable of genuinely examining water-related issues in general and water distribution and water security in particular shall be established in the theory of International Relations.

In subchapter 2.2., I inspected the foundations of such a framework, emphasising that the academic sources of theoretical character are almost entirely lacking. With section 2.3.3. containing their criticism, subchapter 2.3. focused on the two main directions of these rare sources, the neo-realistic neo-Malthusianism and the neo-liberal Cornucopian approach, and their principles related to hydropolitics. Through the overview of basic theoretical principles of neo-Malthusianism and the Cornucopian approach, examples of their practical application, as well as the criticism on theories included, I proved the first sub-hypothesis that states that rationalist theories of material and static character, such as neo-realism and neo-liberalism, are unable to provide a comprehensive analysis of the diversity of interstate relations related to water distribution.

Subchapter 2.4. aimed to introduce constructivism as an alternative approach, arguing that such a theoretical framework has a significant added value when it comes to issues of water, water distribution and water security. To prove the accuracy of the statement, I reviewed the general ontological, epistemological, and methodological characteristics of constructivism, setting conventional constructivism as the main frame of analyses. Then I went on to examine the applicability of the theoretical framework in the context of hydropolitics, proving its added value. Middle-range theories are needed and suitable to mediate the metatheoretical framework of constructivism. Out of these, I highlighted three notions of the Copenhagen School in subchapters 2.4.3. and 2.4.4. The review of these notions revealed that sector theory, the theory of securitisation, as well as the theory of regional security complexes – or its upgraded form, the hydropolitical security complexes – have an added value when it comes to examining interstate relations related to water distribution. Through this, I proved the second sub-hypothesis of my dissertation on the theoretical level, namely that constructivism offers sufficient founding principles and tool set for examining interstate relations related to water distribution, thereby supplementing the shortcomings of neo-realism and neo-liberalism.

In addition to drawing theoretical conclusions, I found it crucially important to prove the above-mentioned statements also through the analysis of a case study. The case I used as example is the water distribution relations of two pairs of states of the Central Asian

hydropolitical security complex: Tajikistan-Uzbekistan and Kazakhstan-Kyrgyzstan. In the third chapter of my dissertation, I provided a comprehensive overview of the region and the states found within, as well as presented two veterinarian's horses of the dimension of friendship and hostility, the Rogun Dam and the Kambar-ata 1 Dam, complementing the latter with the Kazakh-Kyrgyz cooperation established upon catchment basin of rivers Chu and Talas. Secondly, I studied the hydrological context influencing interstate relations related to water distribution on the material level. Finally, I provided proof that the region can indeed be regarded as a regional/hydropolitical security complex.

The next three chapters of the dissertation were devoted to discussing three typically constructivist methods, respectively. This provided the opportunity to establish the truth of the third sub-hypothesis which stated that developing water security discourses are either intermediates in the political-economic-social context, or they can appear as independent variables through the dynamics of the meanings rendered. With the help of the ethnographic research, the political-economic-social context, as well as the water security discourses emerging were examined, which affect the development of interstate relations. Three examples were brought in support of this argument: the hydraulic societies of historical Central Asia, the monumental water-related constructions of the Soviet "civilising mission," as well as the state and nation-building endeavours in the newly independent states after the dissolution of the Soviet Union. I combined the method of comparative process tracing with the application of the securitisation theory and examined the political-economic-social context, the water distribution discourses, and the development of interstate relations in three different periods (1960-1991; 1991-1999; and 2000-2010). I found a clear connection and, with the help of the Kazakh and Kyrgyz dyad, I was able to prove that discourses can appear, beyond their role of mediating context, as independent variables in the development of interstate relations. My aim with the application of the third constructivist method, discourse analysis, was to make direct observations with regard to the water distribution discourses present in the two dyads in question, thereby checking and supplementing my conclusions. In subchapter 6.1., I made comprehensive analyses of different source types in due time periods which confirmed the results of the direct examination of the discourses. Examining news appearing between 2010 and 2016, in subchapter 6.2., I presented the survival of the narratives of conflict and cooperation in the Central Asian hydropolitical complex. Thus, my third sub-hypothesis was proved through the application of the three constructivist methods, while their results helped confirm my first and second sub-hypothesis in practice.

This way, the fourth sub-hypothesis was proved in theory (changes of water security discourses can influence and shape interstate relations on water distribution; therefore, their point of origin is different from that of the theories of material and static character, thereby providing a set of tools capable of not only examining the diversity of interstate relations on water distribution but handling, relieving and solving crises). The demonstration of the sub-hypothesis in practice becomes a task for future research.

In light of the facts mentioned above, I proved my hypotheses in the following manner:

H1: Rationalist theories of material and static character, such as neo-realism and neo-liberalism, are unable to provide a comprehensive analysis of the diversity of interstate relations on water distribution.

Proof: Neo-realism and neo-liberalism 1) consider material factors primary over ideas. 2) They apply similar methods as natural sciences, with special regard to positivist and quantitative approaches. 3) They do not find it of primary importance to examine the role of identities, norms and values. 4) They often disregard the role of context in the analysis of international affairs, especially when it comes to the social, linguistic and cultural context. 5) They describe general principles independent of time and space, their hypotheses are often deterministic. This largely restricts rationalist theories, especially when it comes to differences occurring between social laws and natural laws, such as the analysis of identities, norms, values, cultures and languages, the insight into processes behind social changes, or the description of power relations – all of which could be vital to the understanding of interstate relations related to water distribution.

The fact that the first sub-hypothesis was proven does not mean that my dissertation regards rationalist theories as insignificant to the analysis of interstate relations related to water distribution (as shown in subchapters 2.3.1. and 2.3.2.), as they have provided numerous valuable analyses, have called attention to significant tendencies, and have even contributed to the easing of water-related tensions in the short history of the theoretical approach of hydro-politics. By my argumentation, though, constructivism, in comparison with rationalist theories, has a significant added value when it comes to the analysis of interstate relations related to water distribution.

H2: Constructivism offers sufficient founding principles and tool set for examining water-related interstate relations, thereby supplementing the shortcomings of neo-realism and neo-liberalism.

Proof: Based on theoretical overview, the conclusion can be drawn that constructivism 1) gives room for the analysis of changes in water-related conflicts and cooperation. 2) It considers both material and ideational factors in the development of water-related conflict and cooperation, understanding their unity and interactivity. 3) It is capable of decomposing concepts considered fundamental by traditional rationalist theories, i.e. water scarcity, as well as unveiling their mechanisms. 4) It allows the examination of new elements as compared to the narrowly-defined worldview of traditional rationalist theories, thereby broadening the horizon of analyses, as well as involves new explanatory factors, such as culture and language, thereby contributing to a deeper understanding of reality through the introduction of the context. Observations correlated by the three constructivist methods (ethnographic research, comparative process tracing and discourse analysis) cannot be fully uncovered by the means of traditional rationalist tools because of their ontological, epistemological and methodological limits. This proves that constructivism has an added value in the analysis of interstate relations related to water distribution from the point of view of practical application.

H3: Developing water security discourses are either intermediates in the political-economic-social context, or they can appear as independent variables through the dynamics of the meanings rendered.

Proof: The role of discourses, which either mediate the political-economic-social context or appear as independent variables, in shaping interstate relations on water distribution is clearly proven through the triangulation of the three constructivist methods used. Ethnographic research demonstrated the power of discourses which mediate the political-economic-social context, in traditional Central Asian hydraulic societies, during the time of the Soviet “civilising mission” and after gaining independence. The comparative process tracing reconfirmed the results of two of the above-mentioned time periods, and the examination of the 2000s presented such a case through the example of the Kazakhstan and Kyrgyzstan, where interstate relations on water distribution were shaped directly by the discourse, not the context. The results of the discourse analysis reinforced that of the other two methods. Thus, phenomena observed in practice confirm my sub-hypothesis.

H4: Changes of water security discourses can influence and shape interstate relations related to water distribution. Therefore, their starting point is different from that of the theories of material and static character, thereby providing a set of tools capable of not only examining the diversity of interstate relations related to water distribution but handling, relieving and solving crises.

Proof: The limits of rationalist theories of material and static character have already been exemplified, and the importance of including changes in the analysis was explored to a certain extent when discussing the added value of constructivism. The fourth sub-hypothesis lays emphasis on this starting point, the theoretical truth of which, strictly speaking, have already been established in the first and second sub-hypotheses. However, it shifts to discuss practical aspects, presuming that the application of the theoretical framework of constructivism, with the help of middle-range theories, can contribute to solving problems of interstate relations related to water distribution, as well as identifying concrete solutions and their adoption in practice, thus helping decision makers. The dissertation proves the above statement only in theory, while it is restricted to do so in practice. Therefore, the full demonstration of sub-hypothesis four becomes a task for future research. Subchapter 7.3. contains a possible scenario.

With the first three sub-hypotheses fully and the fourth partially proved, I consider my main hypothesis proven which states that *changes in interstate relations related to water distribution are shaped by water security discourses which are either related to the changes of the hydrological and political-economic-social context or in several cases have their own dynamics. Therefore, the constructivist approach gains added value over static hydropolitical theories when it comes to their analysis.*

New aspects explored herein include:

- Through connecting spheres of science such as geography, hydrology, hydropolitics, ethnography, international law, security policy and history, the dissertation applies an inter- and multidisciplinary approach to analyse interstate relations on water distribution.

- The dissertation summarises the stages of the development of hydropolitical discourse in Hungarian, which is unprecedented. Even in English, comprehensive overviews of scholarly character are seldom.
- The dissertation is a contribution to the theorisation of hydropolitics. As presented previously, it is an ongoing process and its significance is underlined by events such as growing water scarcity, water-related tensions, and changes in cooperation.
- By way of proving its hypotheses, the dissertation confirms that the theoretical framework of constructivism has an added value as opposed to rationalist theories when it comes to the understanding and analysis of interstate relations related to water distribution.
- The dissertation carries through the theory of Frédéric Julien [2012] in practice, which suggested that the securitisation theory of the Copenhagen School should be applied to interstate relations related to water distribution.
- The dissertation employs the term ‘hydropolitical security complexes’ and uses it to reinforce its argumentation.
- The dissertation builds its suggestions for practical solutions around the theory of desecuritisation, which could serve as the basis of *policy*-like suggestions.
- The dissertation is founded on the triangulation of three constructivist methods applied to a case study – which is rarely used in International Relations analyses in Hungary. Thence, the reached conclusions can confirm or disprove each other. This way, the dissertation exhibits a convincing yet rarely used method of proof.
- The dissertation improves the Hungarian vocabulary of the theory of International Relations as regards the language of the Copenhagen School and the three methods introduced (ethnographic research, comparative process tracing, discourse analysis).

Being the first stage of a more extensive research, the dissertation opens up new research avenues that can contribute to the theorisation and practical analysis of interstate relations related to water distribution in various ways, as well as the creation of concrete guidelines for decision-makers. A non-exhaustive list is offered below:

- As the Central Asian example included herein is only one case study proving them, it would be worth expanding the scope of case studies analysed to test the hypotheses of the dissertation, the most evident being the dyad of Turkey and Syria. It would also be of service to examine the question of water desecuritisation through the US-Canada

system of relations, as well as uncover cases where the process is attained or is at a more advanced stage. Through the Danube, Hungary is also part of a water distribution system of relations which would be worth inspecting through criteria outlined herein. It could serve as an attempt to prove the fourth hypothesis in practice.

- Tightly related to proving the fourth sub-hypothesis is the compilation of practical policy briefs. The policy briefs can support the argumentation that the theoretical sphere of constructivism and the middle-range theory of the Copenhagen School can facilitate the process of identifying and realising solutions in interstate relations related to water distribution.
- The issue of Central Asian hydropolitical security complexes allows for more research. It would be crucially important to examine the role of Russia in the development of the interstate relations related to water distribution of Central Asia, as well as the water policy of the states involved. This does not form part of the current dissertation, but the research revealed that it would be vital. In the next stages of research, more attention shall be paid to interconnectedness of water and energy-related issues.
- Further research in the topic can be done along the lines of expanding and detailing the theory of hydropolitical security complexes, as well as applying them to additional case studies.
- The ethnographic research requires the unveiling of further details, especially through the research of archives and field trips. This way, primary sources essential for further analysis would be provided.
- The realisation of the three-stage securitisation process in the case study, which is described in subchapter 2.4.3. herein, could not be made part of the current dissertation to limits of length. It would be worth investigating later on, especially since it is closely related to theoretical debate revolving around the question of whether securitisation theory can be taken in authoritarian contexts.
- When it comes to discourse analysis, examining sources written in local languages would broaden the horizon of research.

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