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Identity, Conflict and Cooperation in International River Basins

Jack V. Kalpakian
Old Dominion University

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IDENTITY, CONFLICT AND COOPERATION IN INTERNATIONAL
RIVER BASINS

by

Jack V. Kalpakian
B.S. June 1992, Santa Clara University
M.A. December 1997, Old Dominion University

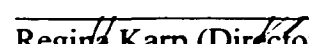
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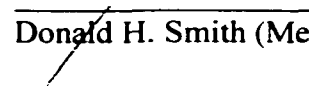
INTERNATIONAL STUDIES

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Approved by:


Regina Karp (Director)


Steven Yetiv (Member)


Donald H. Smith (Member)

ABSTRACT

IDENTITY, CONFLICT AND COOPERATION IN INTERNATIONAL RIVER BASINS

Jack V. Kalpakian
Old Dominion University, 2000
Director: Dr. Regina Karp

This dissertation tests the hypothesis that water disputes cause serious conflict within and between states. It uses a structured case study approach to see whether there is a link between the independent and dependent variables. It also considers the effect of other variables on serious conflict. Specifically it addresses the effects of national identity and the othering process on conflict. The three case studies are built around rivers in the drier parts of the world. This biases the dissertation towards affirming the established mainstream hypothesis which states that water disputes cause serious conflict. In all three cases, historical animosities and perceptions related to issues of national identity were instrumental in causing political conflict and war between and within states. In the Indus Basin, where water disputes have been resolved, conflict between and within India and Pakistan continued unabated. The conflict there dates to 1947 and has recently acquired a nuclear dimension. In the Nile Basin, religion and ethnicity were the primary factors causing all 20th century warfare there. The same pattern also held in the Tigris-Euphrates Basin. In short, water disputes were of no relevance in terms of causing serious conflict. In fact, a strong case can be made that serious conflicts cause water disputes.

**This dissertation is dedicated to my mother, father, sister
and my uncles and aunts**

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CHAPTER I

INTRODUCTION.

Like any other field operating within the greater framework of international relations, the field of studying international river systems reflects the wide diversity of theoretical thought in the parent field. The vast majority of the field is either realist or post-realist. With the exception of a small school of alternative literature, the field holds that water disputes are a cause of serious conflict. Regarding theory, the dissertation's conclusion is dedicated to applying the lessons learned from the rivers to international relations theory through commentary on the major schools. Since this is not a dissertation aiming to construct a theory, the commentary will be of a general nature. The commentary will not delve into the nuances of theory. It is more important to learn what the rivers say about the theories and not vice versa.

The assumption that water disputes lead to conflict is attractive, because we seek to ascribe rational reasons for conflict. Making war to get or keep water appears to be a rational act at first glance. This point of view is not informed by the insights of hydrology which suggest that it is better and cheaper to cooperate in the pursuit of water. Furthermore, water supplies can be generated or revitalized through recycling, reduced use, imports, desalinization, and the creation of "virtual water" through trade with water-rich states. More drastic measures include a shift to drought-resistance animals, reduced family sizes, and the immigration of a part of the population. Serious conflicts and war are almost never seen as a solution to a water dispute. Serious conflict is reserved for

This dissertation is written along the stylistic requirements of *International Security*.

matters that touch people's identities such as their language, history, heritage, and self-image. Water, while vital, is not a cause of conflict. *The argument that there is a link between the water disputes and serious conflict is largely non-historical and reliant on projections of future water shortages. Appreciation of the permanence of droughts in human history is largely missing. Water has been a precious commodity for a very long time.*

The continued relevance of freshwater for civilized existence has attracted the attention of international relations analysts seeking to explain the conflicts between Israel and the Arab states as products of a dispute over the waters of the Jordan River. Analysts like Joyce Starr contend that the 1967 war was caused by Israel's need for water and that the future holds more water wars.¹ As the literature review later shows, the assumption argued for by Cooley and Starr had a presence in the literature concerning water disputes long before they wrote their respective works. The case for a link seems so convincing that no test of the basic underlying assumption has taken place within the discipline of international relations, its branches or interdisciplinary offshoots. The assumption that water disputes cause serious conflict has not been put into the form of a hypothesis and tested. This glaring gap in the literature is filled by this dissertation.

Testing the hypothesis through a structured case study method led to a completely unforeseen result. Water disputes do not cause serious conflicts. The river basins used to test the assumption are in some of the world's most war-prone areas: the Nile, the Tigris-Euphrates and the Indus.

¹Joyce R. Starr, "Water Wars," *Foreign Policy*, No. 82 (Spring 1991); John Cooley, "The War over Water," *Foreign Policy*, No. 54 (Spring 1984).

The case studies have also been biased towards arid regions. This bias is designed to favor the hypothesis that disputes over water cause serious conflict. Despite this built-in bias, the dissertation shows no causative link between disputes over water and serious conflict. The two countries most dependent on outside sources of water are in Europe and Latin America, but Austria and Paraguay do not have conflicts over water disputes with their neighbors.²

DEFINING WATER DISPUTES AND SERIOUS CONFLICT

As the literature review later shows, there is a tendency to equate water disputes with serious conflict. Water disputes can and often do occur between states that have no serious conflicts with each other. The United States and its two continental neighbors have had many disputes over the Rio Grande River, the Colorado River and the Great Lakes, but these disputes have never been regarded as serious conflicts. A water dispute is disagreement between two states or sub-state territorial factions over the utilization of the water resources of a river basin such as the dispute between Egypt and Ethiopia. Past water disputes like the quarrel between India and Pakistan over the Indus River are also included in this dissertation to gauge the effects of the settlement of water disputes on the propensity of states to engage in serious conflict against each other. Water disputes are brought into the body of this work through the variable of water utilization. For the purposes of this dissertation, differences over the utilization of water and protests over unilateral development programs constitute water disputes in this dissertation.

²Peter H. Gleick, "Water and Conflict: Freshwater Resources and International Security," in Sean Lynn-Jones and Steven E. Miller, eds., *Global Dangers* (Cambridge, Mass.: MIT Press, 1995), pp. 103-117.

The term "serious conflict" means war, tense diplomatic standoffs, insurgencies and openly hostile diplomatic relations. Serious conflict can be found in all three basins studied under this dissertation. *Among the dozens of serious conflicts that have taken place in the three basins, not a single serious conflict has been caused by water disputes.* Water disputes are simply another field for inter-state and inter-communal conflicts rooted in the questions of national identity. To use a domestic example, disputes over water in the United States end up being settled in court between armies of competing lawyers. That this possibility exists in the United States suggests that water disputes are not, by themselves, the cause of conflict. But more importantly, as adversarial as American courts are, they pale in comparison with the bitterness of the relationships between Sudan and Ethiopia, India and Pakistan and Syria and Turkey. These conflicts are not merely more serious forms of the plaintiff/defendant relationship. The dissertation shows that they are products of deep national identity-related factors dating to the formation of the various states and their relationship with each other and their own peoples. All three cases negate the link between serious conflict and water disputes.

METHODS

National identity is the cause of most of the conflict in international river basins, but the research question is whether disputes over water cause serious conflict between and within states sharing a common river basin. The actors examined include both states and non-state actors capable of independent military or paramilitary action. In order to contribute to the field in a meaningful way, the dissertation is formatted along the lines of all previous work involving international river systems as the primary object of study or

analysis. The sub-field's leading analysts, cited in the literature review, all use one form or another of the comparative methods developed by Theda Skocpol and ultimately John S. Mill. It is not the purpose of this work to delve into the arcane debates surrounding this method. The method is sufficient for the purpose of testing the field's main assumption. As already stated, the structured case study approach is used by the leading analysts in the field of conflict in international river basins: Mariam Lowi, Nurit Kliot and Thomas Naff. The approach dates to the sixties when it was applied by Indiana University professor James W. Scott to study international river systems. Consequently, this effort falls squarely in a well-defined, albeit small, body of literature concerned with conflict and cooperation in international river systems.³

The dissertation's case studies use sections devoted to specific variables: natural hydrology, utilization, regimes, conflicts and issues of national identity. Each case study opens with an introduction followed by the first variable which is the natural unaltered hydrology of the river basin in question. The larger and more complicated a river basin is, the longer this descriptive portion of the case study.

The Nile has a far more complicated hydrology than the Indus River, and consequently, it takes more time to define and describe it. Furthermore, most of the previous work excludes Uganda and sometimes even Ethiopia, so the Nile has an unwarranted reputation for being given parsimonious discussion. With its dozens of

³James W. Scott et al., *International Rivers: Some Case Studies* (Bloomington, Ind.: Indiana University Dept. of Geography Occasional Publication No. 1, 1965); Mariam Lowi, "Rivers of Conflict, Rivers of Peace," *Journal of International Affairs*, Vol. 49, No. 1 (Summer 1995); Thomas Naff and Ruth C. Matson, *Water in the Middle East: Conflict or Cooperation?* (Boulder, Colo.: Westview Press, 1984); Nurit Kliot, *Water Resources and Conflict in the Middle East* (New York: Routledge, 1994).

tributaries and a basin spanning nine countries, it is the most complex river in the dissertation. It is also the only river in the basin not to experience a unifying imperial presence. Constantly shared by Egypt and Ethiopia since time immemorial, it never had a common regime imposed upon it like the Indus or the Tigris-Euphrates. Its dominant power, Egypt, has never fully disengaged from the countries it ruled in the past, so there is no true date of decolonialization in the Nile. As a result, the Nile case study begins with Egypt's invasion of the Sudan in the 19th century. In the Tigris-Euphrates basin, we have a date for the basin's partition into several states after the collapse of the Ottoman Empire. In the Indus basin, it is possible to use the partition of India as a date of the "internationalization" of the river. The Nile system has never known a single unifying empire for a second reason as well, because the British never attempted to conquer Ethiopia. As a result, the Nile's conflict variable chronicles the conflicts that have been fought in the basin since the initial Egyptian foray into the Sudan in the 19th century. Conflicts with Ethiopia soon followed Egypt's Sudanese adventures, with disastrous results for both states. The complicated hydrology of the Nile and the many conflicts within it make the Nile a special case study. Given the complex nature of the basin itself and its tributaries and the different history, it is necessarily larger than the other two case studies. After a century of exploration, there are still some disputes over the extent and the size of the Nile and its drainage basin. Defining international rivers is the dissertation's first task.

NATURAL HYDROLOGY

The amount of water contributed by each country and its share of the drainage basin is described in as much detail as possible. It is not possible to begin talking about a

river without knowing where it comes from, where it goes and how much water it discharges every year. Information on tributaries and the sources of water in these various countries is also presented here. The path followed by the given river is also detailed. Once a river system is defined, it becomes possible to discuss the human impact and alterations of the river.

WATER UTILIZATION

The second portion of the case study deals with the physical structures and utilization programs created by people on these rivers. This is primarily a description of the dams, irrigation schemes, hydroelectric projects, and their respective performance. This segment concludes with a discussion on the future population figures and projected agricultural needs. This section also addresses the concerns raised about the dramatic increases in population and their impact. Population is a function of agricultural and economic development. Population increases without a commensurate increase in agricultural or industrial output lead to starvation or increased poverty. Population increases also indicate future standing within a basin's hierarchy of power, because armies are ultimately composed of people and not merely technology. It would be impossible, for example, for Egypt to bully Ethiopia if the latter had twice the population of Egypt along with the ability to feed itself.

Egypt's rejection of the Sudan's Nile Valley Project in the 1950s was an example of a water dispute. Ethiopia's protests over the Aswan High Dam and Egypt's displeasure with Ethiopia's proposed dam projects are also examples of water disputes in river basins. In the Indus, the water dispute was about Pakistan's right to use water originating in India. In the Tigris-Euphrates, the water dispute centers around Turkey's

Southeastern Anatolia Project (GAP in its Turkish acronym). Water disputes manifest themselves in this dissertation through disagreements over proposed unilateral water development programs. In other words, a discussion of water utilization programs is really a discussion about concord and discord over a river.

REGIMES

The third segment of the case study deals with treaties, agreements and other forms of regimes in the basin. According to the established hypothesis, countries with established water regimes would have fewer water disputes, and consequently should have fewer serious conflicts. The existence of water allocation regimes along with wars and other forms of serious conflict would jaundice the hypothesis that argues that water disputes cause serious conflict. Within the realm of international relations, the case of the Indus River confounds cooperation-based international relations theories, because India and Pakistan maintain a harmonious hydraulic relationship while confronting each other militarily.

POLITICAL CONFLICTS AND WAR

The fourth part concerns wars and other serious conflicts in the given basin and their causes. The chronicle of conflicts in each basin begins with the collapse of the given basin-wide empire and the establishment of new entities that now have to share it. This is applicable for the Tigris-Euphrates and the Indus, but it presents some problems for the Nile, as has already been argued. Water disputes do occur in the arid basins studied in this dissertation, but they have not been a factor in serious conflicts in these areas. National identity consistently trumps water disputes as a causal factor in serious conflict. The role of the conflicts in shaping the attitudes of the basins' peoples and

states towards each other will be examined very closely. Common memories are one of the means populations and states use to create a sense of national identity, and if a co-riparian has been involved in massacres or revolt, it becomes the "other."

IDENTITY

Aside from the notion of the "other," national identity is linked with language, religion, culture and self-perception. It is often at the core of the country's *raison d'être*. Countries, particularly new states, attempt to construct a sense of national identity out of the common myths, cultures and languages within their boundaries. It is not possible to discuss this topic without offering some definition of "national identity." Anthony Smith, a student of national identity, argues that there are two competing definitions of this concept. He first describes what he considers to be the Western conception of national identity. The components of a Western conception of national identity are a sense of a political community, a community of laws and the equality of persons within the legal and political community described as a nation-state. According to Smith, the "ethnic" definition of national identity is based on descent, common myths and language. Despite their differences, these two models have influenced each other. In addition, they do share a set of assumptions that enable analysts to define "national identity" to include:

1. an historic territory, or homeland
 2. common myths and historical memories
 3. a common, mass public culture
 4. common legal rights and duties for all members
 5. a common economy with territorial mobility for members.
- A nation can therefore be defined as *a named human population sharing an historic territory, common myths and historical memories, a mass*

*public culture, a common economy and legal rights and duties for all members.*⁴ [italics by Smith]

For Smith, these two concepts of national identity have cross-fertilized each other, because of the vast influence of the Western world. As the source of myth, tradition and culture, religion plays an important role in the formation of ethnic identity -- which often lies at the core of national identity, especially when the national identity in question is not "Western" or "Civic." Religious identity emerges from "socialization and communication." It is based on shared religious experiences and rituals:

They [sic, religious identities] are based on alignments of culture and its elements -- values, symbols, myths and traditions, often codified in custom and ritual. They have therefore tended to join in a single community of the faithful all those who feel they share certain symbolic codes, value systems and traditions of belief and ritual, including references to a supra-empirical reality, however impersonal, and imprints of specialized organizations, however tenuous.⁵

National identity can help us understand security problems because it is organically tied to the concept of the "other." Martin Heidegger coined the term, and used the concept to philosophically justify Germany's aggression.⁶ But Heidegger was not the first philosopher to "other" peoples he dislikes. Aristotle certainly looked down on the "barbarians" -- who included all non-Greeks in their ranks. In contrast, modern scholars of international security, such as Ronnie Lipschutz and James Der Derian, use

⁴Anthony D. Smith, *National Identity* (Reno, Nev.: University of Nevada Press, 1991), p. 14.

⁵Ibid., p. 6. Smith cites M. Sprio, "Religion: Problems of Definition and Explanation," in Michael Banton, ed., *Anthropological Approaches to the Study of Religion* (London: Tavistock, 1966).

⁶Richard Wolin, *The Politics of Being* (New York: Columbia University Press, 1990).

the concept to explain (not justify) the sources of conflict and insecurity. Lipschutz argues that "security, moreover, is meaningless without an 'other' to help specify the conditions of insecurity." For Lipschutz and Der Derian, Nietzsche captured the essence of the state and conflict in *Beyond Good and Evil*:

In the last analysis, "love of the neighbor" is always something secondary, partly conventional and arbitrary -- illusory in relation to *fear of the neighbor*. After the structure of society is fixed on the whole and seems secure against external dangers, it is this fear of the neighbor that again creates perspectives of moral valuation.⁷

It is impossible to be at war or in serious conflict without at least two identities in competition, either internationally or internally. Furthermore, the national identities often reserve a hostile place for each other as "others." Alternatively, a group's identity can be wedded to identity of another through the mechanism of religion or culture. A simple framework is applied to reveal how national identity issues have influenced conflict in the dissertation's river basins. First, the dissertation examines the state's self-image and self-definition. Does it attach religious and ethnic markers to its name? Is the nature of the state in dispute internally? Does it face the threat of ethnic separatism? Second, the dissertation reveals "other" in the case of each state or group within and without the state. Third, the dissertation examines any special historical memories or circumstances that operate within the national or ethnic identities of the groups under consideration.

A country's construction of its national identity causes conflict within and outside its borders. Water disputes do not cause the conflicts, they are secondary for

⁷Fredrick Nietzsche, *Beyond Good and Evil*, (London: Oxford University Press, 1998); James Der Derian, "The Value of Security," in Ronnie Lipschutz, ed., *On Security*, (New York : Columbia University Press, 1995) pp. 32-37; Ronnie Lipschutz, "On Security," in Ronnie Lipschutz, ed., *On Security* (New York : Columbia University Press, 1995), p. 9

conflicts rooted in national identity questions—at most. The three major Indo-Pakistani wars, the Kurdish insurgencies in Iraq and Turkey and the Sudanese civil wars are not products of disputes over water. These conflicts are caused by clashes over the states' identities. In this section, the dissertation shows how each country and people views its co-riparian others. In particular, the basis used to construct the national identities of the states in question are examined and critiqued. The dissertation shows who are the "others" within and without these various societies.

THE CASE STUDIES

THE NILE

At first glance, Egyptian hydraulic policy seems to confirm the initial hypothesis. Egypt seeks to monopolize the waters of the Nile at the expense of the other states in the basin. It sought to destabilize the Sudan in 1958 and incited a coup there to insure that the Sudan would be compliant in Nile-related matters. A closer examination, however, reveals that Egypt is not motivated by a desire to maximize its water supply. Plans to maximize Egypt's water supply must entail upstream storage in Ethiopia or Uganda. But Egypt is more concerned about controlling the Nile, because its Aswan High Dam wastes about 10 to 13 billion cubic meters (cubic kilometers) of water every year. Even the most ambitious Ethiopian Nile development programs call for the use of 6 cubic kilometers of Nile water a year. Egypt and the Sudan could easily compensate for the Ethiopian use of the river by increasing efficiency, lowering the level of Lake Nasser, and by encouraging peasants to water their plants at night. Egypt's hydraulic policy is driven by a historical reality called the Fashoda complex -- fear of a state more powerful than Egypt upstream.

As a result, Egypt does not object to keeping Ethiopia at war and in poverty. The religious and ethnic animosities between and within Ethiopia, Uganda and the Sudan have served Egypt's interests well, but these interests are ethnic and religious and not hydraulic.⁸

Historically, Egypt has been the empire-building state in the basin. Its troops conquered the valleys and the plains of the Nile basin, but they have generally failed miserably when encountering well-organized mountain polities like Ethiopia and Darfur. The arrival of the French at Fashoda in the late 1890s brought fear of Egypt's living in the shadow of France or some other powerful state upstream. This fear continues to inform Egyptian foreign policy in the Nile basin. The Mahdist revolt demonstrated to Egypt its inability to dominate even the Sudan. As a result of these fears, the extremely inefficient and hydrologically inappropriate Aswan High Dam was built. The Sudan's decision to cooperate with Egypt in the building of the Aswan High Dam is a direct consequence of the pro-Egyptian attitudes of a large portion of its elites and is actually in direct contradiction to the Sudan's own interests which are very similar to Ethiopia's. Conflicts in the basin have generally been about Egypt's and Britain's desire for empire and quarrels within countries about their respective national identities. Disputes over water have not directly caused serious conflicts, even when Egypt stood to benefit from fomenting war upstream.⁹

⁸Peter Chesworth, "History of Water Use in Sudan and Egypt," in P. Howell and J. Allen, eds., *The Nile* (London: School of Oriental and African Studies, 1994).

⁹P.M. Holt and M.W. Daly, *A History of the Sudan: From the Coming of Islam to the Present Day* (New York: Longman, 1988).

THE TIGRIS-EUPHRATES

While the most powerful state in the Nile is downstream, the most powerful state in the Tigris-Euphrates basin is upstream. Turkey clearly possesses more power than Syria and Iraq. Its only equal in the basin may be Iran, but it is too early to comment about the relative strength of these two states with regard to each other. The Tigris-Euphrates states do not, generally speaking, cooperate with each other in matters of water. Turkey, like Egypt, regards the rivers to be its property and the supply of water to Syria and Iraq a function of its charity. Syria has supported the *Partia Karekerin Kurdistan* (Kurdish Labor Party -- PKK in Kurdish) in the past and Turkey's Southeast continues to suffer from insurgency, despite the capture of the head of the PKK. It is tempting to attribute the past Syrian support of the PKK as retaliation for the dams on the Tigris and Euphrates (The GAP project), but the history of these two states suggests that even were the river absent, the bitterness remaining from the First World War would render the serious conflict between Syria and Turkey nearly inevitable. Such a conflict would not necessarily entail a war.

Neither Syria, Iran, Iraq nor Turkey has attempted to improve relations with other co-riparians. Iran and Syria tend to cooperate with each other against Iraq, but this is the extent of the friendship. Turkey's claim to be a European country is based on a desire to avoid being associated with Arabs. This claim is also partially based on historic animosity for Arab peoples, because the latter in alliance with the British defeated Turkey in World War I and expelled and killed Turks living in Arab lands. Syrians and other Arabs also remember the treatment meted by Jamal Pasha to the leading families of the fertile crescent during his tenure as governor of Syria, and return the ethnic hostility back

to Turkey. Iran and Iraq have created a similar dynamic between each other as a result of the Iran-Iraq war; Syria and Iraq have done the same to each other in the context of the internal Ba'ath rivalry.

In short, water disputes are not a cause of conflict. Water disputes can be solved between states, because they are engineering and allocation problems once the states and entities involved agree to solve them. Disputes over water are a function of pre-existing international and inter-communal struggles. They are an additional field of combat for these conflicts, but they lack causal effect on them. Turkey, Syria and Iraq can solve their water disputes, but they do not. They do not resolve their water disputes, because these problems have little to do with water itself. They are about feelings of betrayal, national identity and a desire (largely unstated) by Turkey to return to the rank of great powers as it once was. Ultimately, water disputes can be resolved through two tracks. The first track is related to allocation of water to the various states in the basin. There are adequate international precedents as well as a set of rules with which to divide the water, as Nurit Kliot shows. The second track involves the joint design and management of the various dams, headworks, canals and other infrastructure to manage the flow of water. Neither of these two things is outside human ingenuity, but they both entail a deliberate decision to cooperate with co-riparians and to take the interests of local peoples into consideration. When there are powerful cultural and identity-related inhibitions to cooperation or when there is a desire by one state to dominate the basin, there would be no cooperation. In hydrology, the lack of cooperation leads to sub-optimal outcomes, because valuable storage and irrigation sites are rejected on political grounds. Non-cooperation is a deliberate decision that is based on the premise that it is worth sacrificing some water to

make co-riparians experience the unpleasantness of polluted water, water shortages and dependency. In other words, non-cooperation in international river systems is not caused by water disputes but is rather a deliberate decision to have water disputes as a part of a broader matrix of conflict between states, peoples and communities. Turkey's decisions in the Euphrates must be seen in this light.¹⁰

THE INDUS

Turkey's desire to return to the ranks of the great powers can be forgiven in light of the events in the Indian subcontinent. India and Pakistan have solved their Indus water allocation dispute through a treaty assigning water from certain tributaries to India and leaving Pakistan with the Indus itself and two major western tributaries. Despite the treaty, the wars did not stop. The conflict between the two states has also taken on an internal form with Pakistan supporting Kashmiri militants seeking union with Pakistan, Sikh Punjabi separatists and other factions within India. India, on the other hand, has been supporting Sindhi separatists and factions of the *Mohajir Quami Movement* (MQM) in Karachi. The animosity between the two countries is so deep that newspapers call for nuclear war on occasion. Again, the national identity factor far outweighs the relevance of water disputes in terms of causing serious conflict. In fact, disputes over consumptive rights to Indus water no longer play any significant role in the Indo-Pakistani struggle. The only existing demands for more water in the Indus Basin are within India and Pakistan. In India, the demand for more water was a part of the Sikh nationalist party's (*Akali Dal*) petition with Indira Gandhi during the seventies. Punjab erupted into

¹⁰Graham E. Fuller, Ian O. Lesser, Paul Henze and J.F. Brown, *Turkey's New Geopolitics: From the Balkans to Western China* (Boulder, Colo.: Westview Press, 1993), pp. 49-51.

violence not when Mrs. Gandhi refused to grant the Punjab more water, but when she ordered the army to storm the Golden Temple in Operation Bluestar. The unrest, troubles and terrorism in Punjab began after the entry of the Indian Army into the Sikh holy site and cannot be attributed to any other reason.¹¹ Ironically, the subsequent crackdown and economic stabilization of the state have made Punjab the wealthiest state in India. The Indus, more than any other basin, de-links water disputes from serious conflict.

LOGICAL FOUNDATION

The hypothesis that water disputes cause serious conflict is also implicitly tested in this dissertation by applying a counterfactual method of testing the causality ascribed to water disputes. While the actual methodology of counter-factual theory is not applied directly, it is implicitly present nonetheless. If water disputes cause serious conflicts, then it follows that serious conflicts in the past would also have been caused by the same. The absence of water disputes as a cause of serious conflict in the three basins examined, where conditions would be conducive to serious conflict over water, suggests that water disputes are not a cause of serious conflict.¹² It is impossible to avoid the use of counterfactual logic in any attempt to link causes and effects or any attempt to learn from history.¹³ The roots of this approach lay in the world of law. It is well suited for testing

¹¹Ashutosh Varshney, "Contested Meanings: India's National Identity, Hindu Nationalism and the Politics of Anxiety," *Daedalus*, Vol. 122, No. 3 (Summer 1999), pp. 337-262.

¹²James D. Fearon, "Counterfactuals and Hypothesis Testing in Political Science," *World Politics*, Vol. 43, No. 2 (January 1991), pp. 169-196.

¹³Phillip E. Tetlock and Aaron Belkin, "Logical, Methodological and Psychological Perspectives," *Items -- Social Science Research Council: Counterfactual*

causality, because it allows us to eliminate alternative causes. "In order to ascribe a causal status to an actor or event, one should believe that but for the causal candidate in question the outcome would not have occurred. In other words, one must demonstrate that the causal candidate was necessary, under the circumstances, for the outcome to occur."¹⁴

The case studies show that serious conflict has been erupting in relatively dry river basins over non-water related issues. This effort suggests that water disputes do not cause serious conflicts.

To judge the validity of the core counterfactual, the case studies implicitly use the six criteria, suggested by Tetlock and Belkin, to show that the hypothesis linking water disputes and serious conflict is weak and perhaps invalid. These standards are not absolutes, as their two creators themselves admit, but they are necessary for the proper, logical arrangement of the evidence from the three selected basins. The first criterion is clarity. *The independent and dependent variables need to be specified. In this dissertation, the independent variable is water disputes, the dependent variable is serious conflict and the alternative independent variable is national identity.* Disputes over water are said to lead to serious conflict between states and groups, and the dissertation is a test of the cotenability of this hypothesis. The second criterion is about logical consistency. The principles linking the dependent and independent variables must be cotenable. This is simple enough for a dissertation on river systems. Fresh Water is a limited natural

Thought Experiments in World Politics, Vol. 50, Number 4 (December 1996)
<<http://www.ssrc.org/decemitemsl.htm>>, accessed 19 August 1999.

¹⁴Barbara A. Spellman and David R. Mandel, "When Possibility Informs Reality: Counterfactual Thinking as a Cue to Causality," In Press for *Current Directions in Psychological Science*, <http://www.people.virginia.edu/~bas6g/cf_paper.html>, accessed 9 August 1999.

resource. States and other groups may try to help themselves to water being used by others, leading to serious conflict. This is, on the face of it, a logical position. Yet, people and their creations are not so logical as the dissertation's three case studies show. The third criterion involves historical consistency (the minimal rewrite rule). This dissertation attempts no rewrites of history. Instead, it simply shows that water was not a factor in the wars that have torn these three dry basins asunder. The fifth criterion involves statistical consistency. In this regard, all camps in this debate are somewhat lacking. Useful statistical work has been carried out by people seeking to show a link between water scarcity (defined as vulnerability to shut-off) and conflict. The most vulnerable states (Austria and Paraguay) are not involved in water disputes or serious conflicts. Ultimately, this dissertation is squarely pegged to the sixth criterion described by Tetlock and Belkin -- projectability. Is the field's main assumption supported by events in the real world? This dissertation shows, after comparing the hypothesis to historical events and dynamics, that it is not.¹⁵ Technical terms from hydrology are defined in an appendix. In addition the dissertation's divisions are described in the table below:

¹⁵Tetlock and Belkin.

Table 1: Chapters and Purpose.

Introduction	Summarize and clarify methodology
Literature Review	Place the work within its field
Nile case study	Explains the division of water in a dominant downstream state context
Tigris-Euphrates	Explores sources of non-cooperation in a dominant upstream state context
Indus	Shows how de-linking water disputes from politics does not result in peace
Conclusion	Summarizes the lessons learned
Appendix	Hydrological terms

CHAPTER II

THE LITERATURE REVIEW

The field of international riparian conflict studies is essentially realist or liberal but with different stances on whether water disputes cause conflict. Water disputes can occur between states that have friendly and generally non-conflictual relations such as the United States and Canada –two states with many water disputes but no serious conflict. Serious conflict is therefore not synonymous with disputes. Serious conflict is direct or indirect political and/or military confrontation. A water dispute, on the other hand, is a disagreement over the allocation of water resources in a basin. The primary question of this dissertation is whether water disputes lead to conflict. Realism and Liberalism offer us many insights into the issue but Critical approaches are also useful when discussing the issues that surround and complicate water resource issues. Virtually all international riparian conflict analysts assign some importance to cultural conflict and historical problems, but set them aside citing decreased relevance in the face of water shortages. The water supplies are said to be decreasing due to several factors. These factors include global climate change,¹ population growth (reducing the amount available per capita), and damming and other water diversion programs. The stipulated causes of water shortages vary from author to author. Nevertheless, almost all analysts in this field would fit neatly within a realist-liberal continuum within International Relations.

The field of the study of international riparian conflict is divided into two major schools that do not adhere to any specific pattern. Realist thought can be found on both

¹Gleick, "War and Conflict," p. 101.

sides along with Liberal and Critical ideas. The smaller of these two schools, the alternative school, holds that water disputes could exacerbate conflict, but that these shortages do not, by themselves, cause conflict. This school prefers to emphasize cultural identity, political, and economic variables as more important causes of conflict. The second school, the mainstream school, is much larger. It draws into its ranks scholars from diverse intellectual backgrounds including institutional environmental security scholars, liberal institutionalists, and neo-realists. Compared to many other fields of study, this is a small field, and there are very few scholars attempting to explain or interpret the links between disputes over international river waters and serious conflict.

THE POLITICIZATION OF THE FIELD

The modern scientific and engineering field of hydrology dates from the British studies of the Nile, the Indus and the Ganges during the 19th century. From the beginning, this scientific field has been a highly politicized enterprise. Hydrology is a field dominated by state sponsorship since its inception. Some of the earliest modern hydrologists were British irrigation engineers attached to the Egyptian irrigation department. Political goals and interests dictated the adoption of unsound projects and the rejection of projects that are sound from a water conservation point of view but undesirable politically. Until the 1950s, the field of hydrology remained closed upon itself. The study of international water issues, from a social sciences perspective, was limited to the study of treaties on navigation and water consumption. The 1950s and the 1960s brought the Middle East and its problems to the research agenda of international relations and other social sciences. One of the leading problems in the Middle East is the

perceived relative scarcity of water. Consequently, water and hydrology began to seep into the study of conflict in the Middle East. Water disputes were used to rationalize and explain the Arab-Israeli conflicts and to find rationalize logical reasons for them. The field is marked with a disproportionate Middle Eastern focus, and the Jordan-Litani-Orontes area receives most of the attention. This disproportionate focus on the Middle East influences the methods and the approaches used by many scholars.

John F. Kolars and William A. Mitchell (professors of Geography at the University of Michigan and the U.S. Air Force Academy respectively) are used here to illustrate the effect of the focus on the Middle East on the methodology used by international relations specialists. In their book, *The Euphrates River and the Southeast Anatolia Development Project*, the two authors defend the Turkish Southeast Anatolia Project (GAP in Turkish) and implicitly posit that Syria has no right to use Euphrates water. The two authors explicitly state that they aim for what they call "clearer perspectives" with regard to the hydraulic relationship between Syria and Turkey. This "clearer perspective" unveils itself throughout the book: Syria does not contribute any water, Syrian water projects are inefficient, Turkey is entitled to use all the water in the Euphrates, and that the GAP is a worthwhile project. The two authors call for what they call a *Pax Aquarum* based on Turkish control over the water resources of the Tigris and the Euphrates and their delivery (at a price) to downstream Arab states. Only in their last paragraph do Mitchell and Kolars try to address the Arab response to the Turkish hydraulic empire they propose. They openly state that they favor such a regional regime because Turkey is a NATO ally. The work falls short of even the pretense of objectivity, and the two authors cede the problem of Arab acceptance of their plans to "diplomats and

political scientists."² The problems of the Middle East have proven themselves too complex for "diplomats and political scientists." and this suggests that Mitchell and Kolars really favor a *fait accompli* approach which, given the region's history, is a prescription for more instability, conflict and war.

While the book contains excellent data and other information, it is not useful as an argument due to the authors' political preferences. Seminal issues like international law, the needs of the downstream states, and the treatment of water as a common good are ignored in favor of supporting unilateral Turkish hydraulic plans for the Middle East. The natural water pipelines of the Tigris and Euphrates have carried out what Turkey proposes to do mechanically for many millennia without cost or incident; the most important difference between a pipeline and a river is human control over the water -- and more specifically *Turkish* control. To be fair, Mitchell and Kolars can hardly be blamed for their approach, because the whole field of riparian studies has been politicized for a long time. In the Nile case study, for example, this dissertation discusses the early and remarkable politicization of Egyptian hydrology during days of British rule in Egypt and afterwards. Firmly within a tradition that continues to this day, Kolars and Mitchell seek to expand the power of an ally; they take a major step toward prescribing Turkish hegemony. They assume that water is a valuable resource that needs to be secured for a military ally. They are not alone in promoting Turkish power, a Regime Theorist (discussed below) shares their goals. In other words, water is a cause for war, and Turkey needs to have as much as possible in order to be in a position of economic and

²John F. Kolars and William A. Mitchell, *The Euphrates River and the Southeast Anatolia Development Project* (Carbondale, Ill.: Southern Illinois University Press, 1991), pp. 6, 89-100, 106-113, 143-164, 191, 274-282, 296-297.

agricultural strength *vis-a-vis* non-allies. To that end, both their narrative and text are designed to serve Turkish interests and not knowledge. It is noteworthy that in a 1993 article, Kolars (writing alone) steers clear of implicitly or explicitly endorsing the GAP; he instead provides us with a superb descriptive article outlining the status of the Middle East's water resources.³

Since the causes of various states and actors are diverse and as numerous as themselves, this dissertation avoids interaction with the bodies of advocacy scholarship that litter the field. Instead, this dissertation focuses on the answer to the basic question: "do disputes over water cause conflict?" By focusing on this cause and effect relationship, the dissertation avoids the quagmire of advocacy scholarship. Consequently, the review below includes only scholarship that attempts to answer this basic question.

THE ALTERNATIVE SCHOOL

The leading thinker in this school is Mariam Lowi. She argues that water shortages are not the cause of conflict. She posits that the conflicts themselves seed the national identities of the peoples at war and prevent settlement of water shortages. To that extent, she states that political solutions must precede hydraulic cooperation. It is safe to say that Lowi, a professor at the College of New Jersey and a onetime Woodrow Wilson Fellow, is most inclined towards quasi-critical approaches. She outlines the water problems of the Middle East and then argues that they cannot be solved without a

³John F. Kolars, "The Middle East's Growing Water Crisis," *Research & Exploration: Water Issue* (1993), pp. 38-49.

political settlement and then points out the hydraulic incentives for such a settlement.

Her primary research interests are the Jordan River and the West Bank aquifer. Her book, *Water and Power*, is about the Jordan River. Lowi argues that conflicts over

International River Basins can provide the world with a wonderful opportunity for peace, *after a political settlement is in place*. Her primary focus is on one country-- Israel.

Unlike Mitchell and Kolars she argues that unilateral programs will not insure Israel's well-being and that the solution of water disputes must necessarily take place after a political settlement has been found through negotiation. For Lowi, water is not a cause of conflict:

Furthermore, political conflicts are sometimes so visceral and primordial that they simply cannot be ignored; over the course of their duration they become an inextricable part of the identities of the parties involved. Under such circumstances, technical collaboration cannot be facilitated; rather it must await political settlement.⁴

Lowi is a realist in the sense that she is pessimistic about the potential of functional or institutional solutions in the absence of a political settlement of the Arab-Israeli dispute.

She is also concerned about water's relationship to power. In another article, Lowi analyzes the role of water in the national identity of Israel. Remarkably, Israel's attachment to water is nearly identical to Egypt's attachment to the Nile:

Water, because it is an essential ingredient of agriculture, was and continues to be important to Zionists and to the state of Israel. It has always been linked in some fashion to their security-related concerns, whether of an ideological, economic, or political nature. The primacy of water resources in the continued survival of the Jewish state has been elucidated unequivocally by former Prime Minister Moshe Sharett: "Water for Israel is not a luxury; it is not just a desirable and helpful addition to our system of natural resources. *Water is life itself*. It is bread for the nation – and not only bread. Without large irrigation works we will not

⁴Lowi, "Rivers of Conflict, Rivers of Peace," p. 123.

reach high production levels . . . to achieve economic independence. And without irrigation with not create an agriculture worthy of the name . . . we will not be a nation rooted in its land sure of its survival, stable in its character, controlling all opportunities of production with material and spiritual resource."⁵

While holding that a political settlement is an essential pre-requisite for a solution for the Middle East's water problems, Lowi posits that a peace treaty ought to include a three stage process for addressing the water issue. First, an independent, international experts' panel would be created by the parties. The panel would conduct studies of the water resources of the West Bank and the Gaza strip. In the second stage, the panel would help the various sides fix the allocations. In the final stage, the panel would create monitoring bodies to oversee compliance with the agreement.⁶ While Lowi's assumptions and arguments sharply contradict those of Thomas Naff (discussed later), her policy recommendations partially overlap his ideas about basin-wide technical cooperation. The only shortcoming of her scholarship is its narrow focus. She makes no attempt validity of her conclusions from the Jordan outside the Middle East. While she does study the Euphrates, the work is linked with a Jordan case-study and is inseparable from it, given that Syria is in both Basins. A comparison of the position of water in Israel's national identity with Egypt's attachment to the Nile would have been most informative and would have freed Lowi from the narrow confines of the Jordan valley.

⁵Mariam Lowi, "Bridging the Divide: Transboundary Resource Disputes and the Case of West Bank Water," *International Security*, Vol. 18, No. 1 (Summer 1993), pp.123-124; Michael Brecher, *Decisions in Israel's Foreign Policy* (New Haven, Conn.: Yale UP, 1975), p. 184.

⁶*Ibid.*, pp. 136-136.

A classical realist approach is offered by Ken Hughes Butts -- a professor of Political Military Strategy at the U.S. Army War College. Butts' approach is global, and he does not engage in deep analysis of specific rivers or water resources, aside from those in the Middle East. Essentially, Butts discusses water supply, water demand, water and conflict, policy options, and the strategic implications of water scarcity. He takes a global approach, but he refers to specific case studies throughout his analysis. Unlike analysts in the mainstream school, he holds that many conflicts can be mitigated through efficient use of water. While conceding a link between water and conflict, he does not posit that the causes of conflict can be attributed to water even when water is the apparent cause:

Beware of generalizations and linear thinking; it is difficult to prove that water causes conflict. The 1967 Arab Israeli War is a case in point. Conflict generally has multiple causes, and it may be that water will serve as a catalyst to ignite existing flammable mixtures of ethnic, religious, or historical enmities. From the diplomatic perspective, the environmental security issues such as tensions over scarce water resources, may serve as a useful vehicle to promote communication and goodwill among potential regional combatant. Thus while it may lead to conflict, water resource scarcity may also advance the foreign policy objectives of the United States or any other nation.⁷

Butts' common-sense approach to the problem of water and conflict is hard to fault. Its only shortcoming is that it does not engage in an exposition of the "ethnic, religious, and historical enmities" that seem to carry more weight in as causes of conflict than water shortages do. In addition, the connection between these cultural variables and water disputes is not discussed. Overall, we must remember that Butts' readership is largely military and non-academic and perhaps not given to detailed discussions of trans-cultural conflicts and *othering* processes.

⁷Ken Hughes Butts, "The Strategic Importance of Water," *Parameters: U.S. Army War College Quarterly*, Vol. XXVII, No. 1 (Spring 1997), pp. 79, 81.

While small, the alternative school has been gaining some ground. An Iranian diplomat, Mr. Mostafa Dolatyar, and Prof. Tim S. Gray have published a dissertation on the topic of conflict and water scarcity. Utilizing comparative policy analysis methods, Gray and Dolatyar argue that water scarcity and disputes do not cause conflict, because water is too precious an item to be put at risk in a war. They argue that water has been used as a weapon in war, but that the conflicts themselves were caused by reasons that had nothing to do with the division of water. This analysis is compatible with other approaches used in the alternative school and offers immense potential for cross-enrichment.⁸

THE MAINSTREAM SCHOOL

All scholars within this school argue that water shortages in international river systems cause conflict and perhaps war. They argue that helping end the water problems may help reduce the conflict. Thomas Naff would like cooperation to begin, at a low level, even before political settlements are in place. The leading scholar in this approach is Peter Gleick who is extensively cited by the Woodrow Wilson Center's project on conflicts in river basins. The core of Gleick's approach is borrowed from Canadian scholar Thomas Homer-Dixon, so it is important to quickly explain Homer-Dixon's argument. In two widely read articles, Homer-Dixon outlines the relationship between the environment and security, as he sees it. For Homer-Dixon, environmental degradation leads to social conflict, which in turn leads to violence. Decreases in the

⁸Mostafa Dolatyar and Tim S. Gray, *Water Politics in the Middle East: A Context for Conflict or Cooperation* (New York: St. Martin's Press, 2000), p. 210.

quality and quantity of renewable resources, population growth, and unequal access to resources lead to environmental scarcity. Increased environmental scarcity leads to migrations and expulsions of populations and decreased economic productivity. The movement of populations and decreased economic activity, in turn, lead to weakened states, ethnic conflict, deprivation conflicts, and *coups d'etat*.⁹ Homer-Dixon deliberately avoids discussing the topic of security. He argues that he limits himself to conflict, and more specifically violent conflict:

Unfortunately, the environment-security theme encompasses an almost unmanageable array of sub-issues, especially if we define "security" broadly to include human, physical, social, and economic well-being. We can narrow the scope of this research problem by focusing on how environmental change affects *conflict*, rather than security, but still the topic is too vast.¹⁰

Homer-Dixon implicitly rejects the traditional definitions of security when he attacks realism and its premises. By rejecting the state, Homer-Dixon also rejects state-centered definitions of security. "Realism induces scholars to squeeze environmental issues into a structure of concepts including 'state,' 'sovereignty,' 'territory,' 'national interest,' and 'balance of power.' The fit is bad, which may lead theorists to ignore, distort, and misunderstand important aspects of global environmental problems."¹¹ Despite his apparent discomfort with Realism, Homer-Dixon's influence within this school extends even to the neo-realist Thomas Naff who quotes him on at least one occasion. Homer-

⁹Thomas Homer-Dixon, "Environmental Scarcities and Violent Conflict," p. 170.

¹⁰Thomas Homer-Dixon, "On The Threshold," *Global Dangers*, Sean Lynn-Jones and Steven E. Miller, eds., (Cambridge, Mass.: MIT Press, 1995), pp. 43-44.

¹¹*Ibid.*, pp. 52-53.

Dixon's influence is felt within Naff's work precisely because the two authors share the assumption that resource shortages cause conflict.

Like Naff, Gleick, a high-level researcher for the Pacific Institute for Studies in Development, is heavily influenced by Thomas Homer-Dixon's work. Like the other two scholars, he argues that water is a cause of conflict and war. In his often-quoted seminal work, Gleick begins by telling us that his article intends to outline the links between water and conflict. He then proceeds to discuss his definition of security. Naturally, he defines security to include the environment. While elaborating on his definition on the environment, he tells us that his argument includes a certain assumed "notion" – that instability rises from environmental problems. In other words, he assumes his own argument from the start.¹²

Near the end of his first section, Gleick attempts to change the debate from *whether* environmental concerns can contribute to instability and conflict to *when* and *where*. Like many other analysts he proceeds to offer the customary cultural, economic, and socio-political causes of conflict. He also grants that it is very difficult to disentangle environmental causes of conflict from other cause. In his discussion of water in geopolitics, he discusses the Middle East and quotes Sadat's and Boutros-Ghali's remarks which link war and water. He discusses water as a weapon, the importance of water in economic development, the importance of water in health care and future conflicts over water. He concedes the presence of other causes, but he again dismisses their continuing relevance and turns to global climate change as a source of support. Projected increases in aridity provide him with additional support, but he admits that the relationship between

¹²Gleick, "War and Conflict," p. 86.

global climate change and water supplies is "obscure." Nevertheless, he continues on the basis of assuming that the future entails reduced water supplies for the Middle East and uses a computer model devised in Canada to test the effects of reduced humidity in the Nile and the Litani.¹³

Gleick offers us indices of vulnerability by measuring the amount water withdrawn and comparing it to the renewable resources of various countries. In addition, he lists the countries that rely on outside sources for their water. For Gleick, the most vulnerable countries in the world with regard to water are Congo (Brazzaville), Paraguay, Uruguay, Albania, and Austria. The absence of Middle Eastern states does not elicit a response from Gleick. He instead argues that these countries should be studied further. With the exception of Albania and Congo, these are relatively peaceful countries that generally cooperate with their neighbors and have had little difficulty, relative to the Middle East, with reaching agreements about water. Indeed, Gleick discusses some of Paraguay's, Brazil's, and Argentina's joint projects. At no point does Gleick compare Paraguay with a country like Syria. Even Congo (Brazzaville) and Albania, despite their remarkable instability, have no riparian difficulties with their neighbors. Yet, it was not General Alfredo Strossner of Paraguay, but Al-Sadat (and later on Boutros-Ghali) who warned about war over water. Gleick concludes with a call for more treaties, more international laws and more regimes (both legal and institutional) to build on existing institutions as a solution for the problem. He also calls upon hydrologists to gather and distribute more data.¹⁴

¹³Ibid., pp. 87-103.

¹⁴Ibid., pp. 103-117.

The absence of regimes in the Middle East does not lead Gleick to weigh the difference between Latin America and Europe and the Middle East. As a result, his call for regimes is almost certain to strike deaf ears in the region he had initially identified as the most volatile. Furthermore, Gleick seems unaware of the historic politicization of hydrological services and of hydrology in general. Even today, Egyptian hydrologists will not march to the aid of their Israeli counterparts (and perhaps vice versa) with regard to methods and data. While his conclusions and his basic assumption about the relationship of water and conflict are identical to those of Naff, Gleick operates from an environmental security perspective identical to that of Thomas Homer-Dixon. While Naff's work can comfortably be classified as neo-realist, Gleick's can be said to belong to Environmental Institutional Liberalism.

A neo-realist approach is offered by Thomas Naff to explain conflict and cooperation in International River Basins. In 1984, Thomas Naff and Ruth C. Matson, both then affiliated with the Middle East Research Institute of the University of Pennsylvania, published a study carried out for the Defense Intelligence Agency titled *Water In the Middle East: Conflict or Cooperation*. In that early book, Naff and Matson delve into the history of the states involved as well as the hydrology of the Jordan, the Litani, the Euphrates and Shatt al-Arab the Orontes, and the Nile. According to Naff and Matson, water has been a primary motivating factor of Israeli foreign policy in the region. In their 1984 book, the two scholars state that water is a single factor among many which include nationalism, economics, and ideology when the causes of conflict are analyzed. To Naff's and Matson's credit, the causes of conflict are granted to be "complex" in a very serious and forthright way. This is especially true with regard to their discussions

on the definition of such concepts as security and conflict. Naff and Matson offer cognitive maps and analytical model matrices that put interest power and riparian position in simple tables for each river to explain how use-patterns (potential conflicts) may emerge.¹⁵ Naff later refined his approach in an article in a 1993 edited volume; the 1993 table is clearly derived from the tables Naff offered nine years earlier, but Naff credits another analyst for some of its aspects. In the newer article, he discusses both International and Islamic law in his later work and again offers us his refined matrix for predicting riparian basin conflict by evaluating both hydraulic and power-oriented factors. Despite the model's simplicity and apparent parsimony, it contains many problems that I will discuss below. These problems include the accuracy of the coding, the interpretations Naff offers, and the sensitivity of the model to global change.

¹⁵Naff and Matson, *Water in the Middle East*, pp. 181-198.

Table 2: Naff's "Model for Determining Relative Power and Conflict Potential in Major Middle East River Basins."

Basin	Country	Interest/ Need	Power	Riparian Position	Total
Jordan	Israel	5	9	5	19
	Jordan	5	2	2	9
	Syria	3	3	2	8
	Lebanon	1	0.5	2	3.5
Euphrates	Turkey	5	8	5	18
	Syria	5	3	3	11
	Iraq	4	2	1	7
Nile	Egypt	5	7	1	13
	Sudan	4	1.5	4	9.5
	Ethiopia	3	0.5	4	7.5

SOURCE: Thomas Naff, "Conflict and Water Use in the Middle East," in Peter Rogers and Peter Lydon, eds., *Water in the Arab World: Perspectives and Prognoses* (Cambridge, Mass.: Division of Applied Sciences, Harvard University Press, 1993), p. 280.

Naff offers this table as a key towards understanding conflict in international river systems. Abandoning his concessions to complexity in his earlier work, Naff argues that the issues of ideology, religion, identity and ethnic identity are really veils that cover an underlying hydro-political conflict. He cites Thomas Homer-Dixon in order to exile culture and identity from river basin conflict studies. His table is a neo-realist mechanism *par excellence*. Three conclusions can be derived from this table. First, conflict is more likely when the lower riparian state is more powerful than upstream states. Naff uses this to explain the 1967 Arab-Israeli war. Second, when the most powerful state is also the uppermost state (thus controlling the headwaters), the potential

for conflict decreases. Naff argues that the lack of major Israeli-Syrian conflict has been helped with Israel's seizure of the Golan heights. He also argues that Turkey's dominant position helps prevent conflict with Syria and Iraq. Third, when there is relative equality of power, there will be potential for both conflict and moderate cooperation. Naff argues that this was the case during the 1950 in the Jordan basin.¹⁶

There are problems with Naff's coding. We cannot gauge military power until the armies in question are tested – that is fight each other. While we can be reasonably certain that Israel leads the pack in the Middle East when it comes to military power, we cannot be certain about Naff's other codings. Can Egypt today defeat Ethiopia? What form would such a war take? Given Egypt's past performance against Ethiopia in the 1870s (when it had a similar advantage in technology and organization), the military power coding for the two countries is very open to question. Military power is about more than the number of tanks and fighter jets. Recent developments with UNSCOM and the Iraqi government also suggest that Iraq may retain the capacity to produce weapons of mass destruction, and Naff's table does not account for such a possibility. Finally, the assessment that if the most powerful state is also the upstream state there would be little or no conflict is very questionable. Syria's involvement with various Kurdish factions suggests that this assessment is flawed.

Naff's approach also leads him to disregard some historical realities and future possibilities. For example he argues that regimes and other aspects of cooperative behavior are a product of an imbalance of power in the various basins. Following this

¹⁶Thomas Naff, "Conflict and Water Use in the Middle East," in Peter Rogers and Peter Lydon, eds., *Water in the Arab World: Perspectives and Prognoses* (Cambridge, Mass.: Division of Applied Sciences, Harvard University Press, 1993), pp. 280-281, 283.

line of logic, he argues that "only when Egypt, the Nile's premier power, agreed, was the 1959 treaty with the Sudan signed." Naff assumes that the Sudan wanted the treaty and that it was somehow begging Egypt for the agreement. The reality is that Egypt imposed the treaty on the Sudan through a campaign of de-stabilization and through a *coup d'etat*. He also disregards the fact that Turkey's current power has not led to the establishment of cooperative arrangements in the Tigris-Euphrates basin. Finally, he regards Israel's military self-help in the Jordan as permanent, discounting Palestinian and Jordanian demographics and the possibility of estrangement between Israel and its leading ally.¹⁷ To his credit, Naff once understood that the causes of conflict in International River Basins are "complex," and it is one of the aims of this dissertation is to confront this complexity head on rather than to attempt to find ill-fitting "keys" and "models."

Given his solid analytical neo-realism, Naff surprises us with two recommendations that could have come from the pen of David Mitrany, the founder of functionalism. First, he suggests that grand cooperation is not possible in the Middle East with regard to International River Basins, so he suggests a lower level of cooperation – cooperation between scientists and technocrats in the various states within epistemic communities. Second, he recommends the creation of two types of institutions: River Basin data clearinghouses, and comprehensive institutions for regional hydrological issues. In these institutions, scientists and technocrats from the various basins would work together in a multinational environment.¹⁸ Of course, these recommendations

¹⁷Ibid., pp. 276-278.

¹⁸Ibid., pp. 283-284.

overlook the historic politicization of hydrology. Alternative school analysts would probably dispute the wisdom of his proposals in the absence of a political settlement.

Despite its title, Nurit Kliot's book does not discuss whether water shortages cause conflict. It is built on the *assumption* that water disputes are a source of conflict. A literature review of this topic would be incomplete, however, if it excluded a summary of Kliot's book, *Water Resources and Conflict in the Middle East*. Kliot's efforts were sponsored by the Israeli Ministry of Foreign Affairs, and the book seems to have benefitted a great deal from that relationship. Kliot's book contains three case studies, the Nile, the Tigris-Euphrates, and the Jordan. The Nile is treated in both in Middle Eastern and African contexts. The book is written from an Israeli point of view, but its structure enables it to accomplish a degree of objectivity missing in many other works. Kliot's method begins with detailed hydrology of the river basin, she then adds details concerning treaties and geopolitics, and concludes by applying International Law to determine the extent of each basin country's share in the various rivers' water. This approach is not new, but the addition of International law to natural geography and a description of human alterations is not new.¹⁹ In essence, Kliot uses a greatly elaborated form of what has been a standard practice of adding non-hydrological issues to standard descriptive natural hydrology and expositions of the human alterations to the environment. This approach is very old. For example, it was applied by James W. Scott, then a professor of Geography at Indiana University, and others during the sixties.²⁰ It

¹⁹Nurit Kliot, *Water Resources and Conflict*.

²⁰James W. Scott et al., *International Rivers: Some Case Studies*.

was also used by Naff and Matson in 1984. The case studies in the dissertation derive their organization from this basic approach.

Kliot applies this old approach and produces a very informative text for three important reasons. First, it is downwardly compatible with earlier approaches, because it includes a natural hydrology and a description of human activities in the basin. Second, Kliot discusses the political interactions of the various states in the region. Third, Kliot attempts to show how the application of the Helsinki principles (international river law) can be used to conclude the disputes. Ultimately, Kliot's effort is hampered by its projection of what may Israel's own attachment to water on the rest of the region and by the lack of depth in addressing historical issues. The dissertation has been enriched by Kliot's efforts and actually builds on them despite finding the alternative school's approach to be more accurate. First, the dissertation follows a classical river studies approach of including a hydrology and a description of human activity in the regions studied. Second, it discusses the political interactions of the various states in the region as well as international law. Third, it uses history and conflict to describe how peoples and states in the basins saw and still see their neighbors. For example, it does make a difference that Egyptians saw Ethiopia and Ethiopians as inherently unequal during the last century. Another example would be the profound religious antagonism between the Sudan and Ethiopia which has prevented the Sudan from exercising a break with Egypt -- in direct contradiction of its hydraulic interests.

In their book, *Water Wars: Coming Conflicts in the Middle East*, John Bulloch and Adel Dawish, two British journalists, argue that water will be causing wars in the Middle East. Their journalistic book is cited by the Turkish Foreign Ministry on its on-

line position papers regarding water and the Middle East, so their work is serious and deserves serious scrutiny. The book covers the Jordan River, the Tigris-Euphrates basin, the Nile, and variety of other regions. As usual, they showcase Sadat's threats to Ethiopia, and discuss the (current) continuous intrigue and diplomacy over water in the Middle East. By and large, the book is about the accepted conventional wisdom in the field -- i.e. water will cause war. It is easy to read and understand and contains many interesting episodes and events. Unlike Kliot, Bulloch and Darwish do not present us with a proper hydrology. They discuss the rivers and divisions of water, but within the context of their descriptions of the international diplomacy being conducted by the various states. At one point, the two authors come within a paragraph of realizing that roots of the problem may be much deeper than they suspect. "According to Ethiopian and Sudanese representatives talking unofficially during water conferences, one cause of the constant friction is the *Egyptian obsession with history* (emphasis added)."²¹ If this were the case, why was history excluded from the effort?

John Cooley, then an ABC news correspondent, formulated a hydraulic perspective to explain all Middle Eastern history. For Cooley, the history of the Middle East is the history of the struggle over its water resources. He uses the 1967 war as ultimate proof of his thesis. Many other events in the Middle East, such as the Syria ultimatum to late Lebanese President Bashir Al-Gemayel, are interpreted through his paradigm. At various points, he argues that Arab states have quarreled over water. This is true enough, but Cooley ignores the fact that these very quarreling Arab states almost

²¹John Bulloch and Adel Darwish, *Water Wars: Coming Conflicts in the Middle East* (London: Victor Gollancz, 1993), p. 105.

never came to blows over water and were able to settle their disputes through the intervention of other Arab states such as Saudi Arabia. Furthermore, the Arab states and Israel were able to informally cooperate before the 1967 war along the lines of the Johnston plan, so his emphasis on water may be misplaced. At most, he may be able to prove that water seems to motivate zero-sum Israeli water policies article, but it is doubtful that the Arab foreign policies are based on precisely the same motivations. He interprets Israel's wars as essentially wars for water. As far as Cooley is concerned, the whole Arab-Israeli conflict is about water resources. We can therefore conclude that Cooley holds that solving water disputes would lead to solving the problems of the Middle East.²²

Cooley's approach is too neat, too parsimonious, and may not even have any theoretical applicability outside the Middle East. Furthermore, the role of Islam and the importance of cultural differences as a cause of conflict has been highlighted again lately in the tragedy of terrorist attacks in the region that have nothing to do with riparian conflict. It is safe to say that Osama ben Laden is not seeking a larger share of the water resources of a river in the West Bank. Instead, he engages in terrorism because he has what he regards as serious cultural differences with his victims. While the Middle East has suffered a disproportionate share of wars and other catastrophes, it has also enjoyed great periods of wealth, peace, and cultural accomplishment throughout its history from the time of the ancient Egyptians until its most recent zenith during the apex of the Turkish Ottoman Empire. To support his arguments, he needs to do a great deal more work.

²²Cooley, "The War over Water," pp. 3-26.

In a study by the University of California Institute on Global Conflict and Cooperation, Paul Williams argues that weaker downstream states can appeal to International Norms to protect their rights in water disputes with powerful upstream states. He also argues that downstream states can link their interests to those within the powerful upstream state seeking the release of more water, these include those within the powerful upstream state who consume most of the electricity. For example, Syria is advised to purchase Turkish electricity in order to support electric consuming interests in Turkey. Syria is enjoined to accept Turkey's water development programs, purchase electricity from Turkey, and renounce what the author calls "Kurdish terrorism." The approach does not take into account any of the historical difficulties that make these proposals impossible. With regard to William's treatment of this specific case study, his approach fails to account for the reality that the GAP is designed primarily for water consumption within the basin. While the Ataturk Dam on the Euphrates does produce electricity for Western Turkey, it is primarily designed for irrigation. Turkey's hydroelectric effort is concentrated on the Tigris instead. The economic arguments can also be a double-edged sword. By accepting Turkey's offer of electricity sales, Syria would *compete* with the very Western Turkish electricity-consuming interests that Williams identifies as useful to Syria due to their demand for more water releases. Furthermore, Williams' work does not address the internal factors within Turkey that led to the "Kurdish terrorism" he normatively maligns. In short, the Liberal Regimes approach fails to function as an explanatory tool, because it is not without its own internal politicization. It is about norms created by people, and *who* these people are matters. Williams lectures Syria on what to do, but his prescriptions would amount to a forfeiture

of independence from a Syrian perspective given that country's painful relations with Turkey. This lack of in-depth historical analysis in Williams' work limits its applicability or explanatory capability.²³

The difficulties inherent within the mainstream school have led to some attempts to continue to attribute conflict causality to water disputes. Arun Elhance, a professor of geography at the University of Illinois at Urbana-Champaign. Elhance argues that while disputes rising from water scarcity do not cause wars, water scarcity can cause immense social, economic and other disruptions in the third world. The resulting instability, he claims, can cause acute conflicts between states. These conflicts according to Elhance can fall short of war. By "war," Elhance seems to mean conventional army-to-army, inter-state warfare. By "conflict," he means unconventional conflicts within states that "spill" across the border to other states.²⁴ Unfortunately, such a distinction cannot be upheld in an age where the state has been forced to share the stage of international politics with dozens of armed and unarmed interstate actors. In essence, Arun attempts to smuggle water disputes into discussions of conflicts in international river basins by assigning them secondary causality. History and factors that led to the creation of conflicts of identity are not given a thorough hearing in the book, and when history is addressed, it is not a history of the conflicts within a basin but rather the history of water

²³Paul Williams, "Water Usually Flows Downhill: The Role of Power, Norms, and Domestic Politics in Resolving Transboundary Water-Sharing Conflicts," *Policy Paper 29* (University of California Institute on Global Conflict and Cooperation, 1998), <<http://www-igc.ucsd.edu>>, accessed 10 December 1999.

²⁴Arun P. Elhance, *Hydro-Politics in the 3rd World: Conflict and Cooperation in International River Basins* (Washington, D.C.: U.S. Institute of Peace Press, 1999), pp. 225-271.

disputes and related treaties only. The revolts and rebellions in the Sudan are relegated to 3 or 4 pages, without any analysis of the core reasons behind the conflict there.

THE DISSERTATION AND THE LITERATURE

The dissertation makes a unique and lasting contribution to the field for five important reasons. First, the dissertation is unique in this field because it combines hydrology, international law, treaties and agreements, conflict- history and national identity as well as water disputes. All of these issues are discussed, because they offer us a fuller picture of the problem raised by the initial research question. By ignoring history, the mainstream school treats the question in a vacuum. It assumes that conflicts between peoples and states are motivated by material things alone, that national historical memory is as short as it is in North America and that its own perceived objectivity is a consequence of its refusal to deal with historical factors. While some members of this school, particularly Kliot and Naff, have made significant contributions towards understanding the question at hand, it is clear that ignoring history and the factors that shape peoples' national identities is a map that leads us nowhere.

Second, by moving away from the Jordan this dissertation tests the conclusions that have been reached by Lowi from that particular river. As Lowi argued and Kliot's work implicitly demonstrated, there may be serious limits with regard to the generalizability of conclusions reached by studying the Jordan and the West Bank aquifer. If, as Lowi suggests and Naff's 1984 work indirectly implies, Israel regards its spirituality as water-dependent, then it would not be a typical actor in a typical riparian basin.

Third, the dissertation moves away from the Middle East. The manner with which the Nile is dealt is crucial. The focus there is not simply Egypt and the Sudan. Ugandan, Rwandan, Ethiopian and Southern Sudanese history and the conflicts over national identity in those countries are discussed and compared to water disputes as a source of conflict. The third case study is entirely from outside the Middle East. Given that this field has seen its genesis in the Middle East, time has come to see whether conclusions derived from the region can be applied elsewhere. The answer given by the alternative school seems better suited towards explaining water disputes and conflict in the Nile (as an African river) and the Indus.

Fourth, the dissertation tests some of the assessments based on the only models existing within this field. Up to this time, Naff's judgment calls have not been tested and no alternative viewpoint has been provided. Other models exist but they are concerned with the reaction to dam construction in an upstream and downstream bifurcation. Naff's models are really the only application of numerical measurement in this field and they have not been compared to the historical record. On a *prime facie* level, they leave much to desired, and it is important to test them, and other smaller measures derived from them completely.

Fifth, the strength of the mainstream school's asserted causality between water disputes (and water dependency) is tested in the dissertation. According to Gleick, Austria is among the most vulnerable countries to water problems, but we have not yet heard of Austrian plans to invade Slovenia or Hungary in order to secure water. We have not heard of Paraguayan plans to invade Bolivia for water either. In contrast, it has become customary for leaders in the Middle East to declare that they would wage war

"only for water" and be praised for it in Western circles. This praise was most recently heaped on Jordan's late King Hussein for promising to wage war "only for water." Ironically, Islamic tradition enjoins sharing water so the late King's remarks may have had multiple audiences. The same statements, were they to come from an Austrian leader, would probably disturb Slovakia, the Czech Republic, Slovenia and Hungary.

By using arguments and information provided by both schools, the dissertation itself serves as a bridge. While the overall flow of facts and logic supports that conclusions reached by the alternative school, much of the research conducted by the mainstream school has proven itself useful and sometimes essential in this endeavor. Kliot's data and Naff's structure are essential for building the case studies and conducting the comparisons between the various river basins. Ironically, the dissertation finds that the alternative school's basic conclusion, derived from the Jordan, that there is little relationship between water disputes and conflict is confirmed by the methods and techniques used by the mainstream school.

CHAPTER III

THE NILE CASE STUDY

The appearance of modern forms of hydrology enabled human beings to control rivers as large and powerful as the Nile, so it was only a matter of time before governments, including Egypt's, began to hatch plans for controlling and allocating water. Policies were drawn to construct dams and other water projects. The primary focus of this case study is to examine the conditions that have led to the peculiar mix of conflict and cooperation in the Nile basin. To do so, this case study examines the causes and consequences of national water policies. The first section, Natural Hydrology, examines the natural flow of water from the highlands of Ethiopia and the Great Lakes region into the delta of Egypt. Specifically, the water contribution of each country is explored.

The second section, Water Utilization, addresses the issue of water use by the various states. In the case of the Nile, Egypt and the Sudan use the vast majority of the river's water. By and large, Ethiopia and the Central African states have not yet built major dams or water projects on the river, but population growth and the demands of modern economies are forcing Ethiopia and the Central African states to consider developing the Nile. Their hopes for economic and agricultural development can be seen as a threat by Egypt, and to a lesser extent, the Sudan.

The third section, Regimes, of the study addresses the international regimes that have been constructed to manage the resources of the Nile basin. The study examines whether the current regimes provide for conflict resolution and dispute management among the various riparian states. The history and interests of the various Nile river basin

regimes are discussed and analyzed. This section addresses questions like: Were the Nile regimes imposed by a local or international power, or were they the product of local consensus? The various regimes that have governed Nile waters were, and are, often dominated by Egypt; the implications of this are discussed in this section.

The fourth section, Political Conflict and War, addresses political and military friction between and within the various states on the Nile. Is there conflict in the Nile basin? Are concerns over access to water an explicit or implicit *casus belli*? Have countries modified their policies with regard to conflicts between and within neighboring states in order to address concerns over water? Several of the riparian countries are either in civil war or have experienced civil war recently. Have the neighboring states fomented or abetted these conflicts to further their water interests? Have there been non-water related conflicts? What motivated these conflicts?

The fifth section, Identity, discusses national identity. This is the control variable. What factors shape the self-image and national *raison d'être* of the various states in the Nile basin? What role does religion play in the various states? Who is the "other" within and without the various Nile states? And, what effect does the perception of the "other" have in the national policies of the various states in the basin? What role did the colonial period play in the formation of national hydrological elites? What prejudices do these elites bring to work? What effect do these prejudices have on conflict and cooperation in the river basin? The sixth section, Implications, discusses the implications of the case study for the field of international relations. What can the case study tell us about the contributions of the discipline? The main purpose of the case study is to find out whether disputes over access to Nile waters are a cause of conflict between the various states in

the Nile basin. Naturally, the variables of cooperation, conflict, water use, and identity are framed in a natural setting that defines the hydrology of the Nile river basin.

NATURAL HYDROLOGY

There is some dispute as to the extent of the Nile river basin, the countries within its limits, and the length of the actual river. One analyst includes the Central African Republic in the Nile basin area, but most do not.¹ There is a wide range of figures within the literature as to the length of the river and the size of its drainage basin. Depending upon sources used, the size of the drainage basin varies from 2.978 million square kilometers TO 4.0 million square kilometers. If one were to include Ethiopia, the Sudan, Egypt, Uganda, Kenya, Tanzania, the Congo (Kinshasa), Rwanda, and Burundi in the basin area, the drainage area would be 3.03 million square miles and would include 250 million people. The length of the Nile, by the definition used for this study, would be some 6,825 kilometers. According to Nurit Kliot, a leading specialist on international river systems, the confusion over the length of the Nile and the area of its drainage basin is probably caused by the "difficulty of including secondary and tertiary tributaries in the Equatorial Lakes region." This study follows Kliot's precedent and utilizes the definition used by the *Register of International Rivers* and the United Nations. This definition has several advantages over other definitions, because it probably includes all the major secondary and tertiary tributaries.²

¹D. Jovanovic, "Ethiopian Interests in the Division of the Nile Waters," *Water International*, Vol. 10 (1985) pp. 82-85.

²Kliot, *Water Resources and Conflict*, p. 15.

As the above definition implies, the river has a wide variety of sources in many countries. These sources include major lakes like Lake Victoria and minor rivers like the Atbara Nile. Before following the path of the river from the Equatorial Lakes region to Egypt, this study lists the major known sources of the Nile by their country of origin. Listing the sources of the Nile by their countries of origin is important, because upstream water projects almost invariably threaten the water supplies of downstream countries. In the case of the Nile, an interesting irony quickly becomes apparent. The country that contributes the most water to the river, Ethiopia, uses almost none of its water and the country that contributes almost nothing to the system, Egypt, uses the lion's share of the water.³

ETHIOPIA

The most important tributary to the main Nile is the Blue Nile (known in Ethiopia as the Abbay river). The Blue Nile emerges from Lake Tana in Ethiopia. The Blue Nile has a catchment area of 324,530 square kilometers.⁴ Aside from Lake Tana and the Blue Nile system, Ethiopia contributes water to the Nile system through the Sobat and Atbara rivers, two lesser river systems it shares with the Sudan, which together contribute about half the water provided by the Blue Nile. The currents of the Blue Nile have a reputation for being extremely rapid. Indeed the gradient (slope) of the Blue Nile is steep, so it drains its catchment rapidly. In addition, the Blue Nile drains water brought to Ethiopia by the annual monsoon, so it is sensitive to global environmental changes such as the *El Nino* cycle. In the past, the Ethiopian contribution to the main Nile was considered to be

³Ibid.

⁴Ibid., p. 20.

about 84-86 percent of the total water. But given the current *El Nino* cycle and the continuous drought in Ethiopia, it is most probable that the Ethiopian contribution of the Nile system's has declined to about 70-80 percent. Terry Evans, an expert on the Nile, goes even further and estimates that the Ethiopian contribution has probably declined to 60 percent.⁵

Counting water contributions is very difficult because of problems associated with evaporation. The Nile's source, Lake Victoria, is estimated to lose 3.5 cubic kilometers a year to evaporation. Another 13-30 kilometers are lost at the Sudd swamps in central Southern Sudan. In addition, 10 cubic kilometers are lost in the Machar swamps of the Sobat river. When these evaporation figures are compared to the main Nile's mean annual discharge of 90 cubic kilometers at Aswan, Egypt,⁶ the relevance of evaporation to the Nile question becomes very apparent.⁷ Under any method of accounting for water contributions to the main Nile, it is clear that Ethiopia contributes most of the water. Between 1910 and 1970, the Blue Nile, the Sobat and the Atbara contributed an average

⁵Terry Evans, "History of Nile Flows," in P. Howell and J. Allan, eds., *The Nile* (London: School of Oriental and African Studies, 1994), pp. 19-21; Michael Hulme, "Global Climate Change and the Nile Basin," in P. Howell and J. Allan, eds., *The Nile* (London: School of Oriental and African Studies, 1994), pp. 59-82.

⁶Evans, "History of Nile Flows," p. 36.

⁷J.V. Sutcliffe and Jeremy Lazenby, "Hydrological Data Requirements for Planning Nile Management," in P. Howell and J. Allan, eds., *The Nile* (London: School of Oriental and African Studies, 1994), pp. 112-117.

of some 77.7 kilometers of water a year to the main River Nile.⁸ Without question, Ethiopia is the primary water contributor to the Nile system.⁹

THE SUDAN AND EGYPT

The Sudan's contribution to the Nile River system is rather limited . While it controls most of the drainage basin, very little water actually originates in the Sudan. Two Blue Nile tributaries, the Dinder and the Rahad lie within its territory. Only a few of the water-bearing tributaries of the Sobat River are located within the Sudan. In addition, the Sudan is the site of most of the water loss through evaporation in the Nile river system. Consequently, the Sudan can be thought of as a negative contributor to the Nile river system.¹⁰ Like the Sudan, Egypt contributes almost no water on its own to the Nile River system,¹¹ although it is the most important player in terms of high consumption of Nile waters, a role discussed in the section pertaining to water use.

UGANDA AND THE GREAT LAKES STATES

While Uganda controls only 7.7 percent of the Nile basin, it controls 44 percent of Lake Victoria and 600 kilometers of the upper White Nile's channel. In addition, it has a share in all the major great lakes of Central Africa or controls them outright. The most important tributary of Lake Victoria is the Kagera River, which flows into lake Victoria

⁸Kliot, *Water Resources and Conflict*, p. 26.

⁹Paul Howell, Michael Lock and Stephen Cobb, eds., *The Jonglei Canal* (New York: Cambridge University Press, 1988), p. 29.

¹⁰Odidi Okidi, "A Review of Treaties on Consumptive Utilization of Waters of Lake Victoria and Nile Drainage Basins," in P. Howell and J. Allan, eds., *The Nile*, (London: School of Oriental and African Studies, 1994), p. 195.

¹¹Kliot, *Water Resources and Conflict*, p. 30.

from Rwanda and Burundi. It contributes 7.9 billion cubic meters of the White Nile's 18.3 billion cubic meter outflow from Lake Victoria. Kenya controls only 5 percent of lake Victoria, but it has 25 percent of its catchment area. Tanzania controls 51 percent of the lake and 44 percent of its catchment area. Finally, the Congo (Kinshasa) is also a basin state because it controls portions of the Great Lakes the Nile flows in and out of, as well as the Semliki River which contributes some 4.69 billion cubic meters of water to the Nile system a year. Eighteen percent of the water originates in Tanzania, 30 percent comes from Kenya, 12 percent originates in Uganda, and 43 percent of the water comes from Rwanda and Burundi.¹² Over the last two centuries, an elaborate system of harnessing Nile waters has been created to facilitate the utilization of the river's water resources.

WATER UTILIZATION

The natural hydrology of the Nile, as described above, is modified by a vast system of dams, barrages, and canals. First, this section discusses the various water development programs that have been built in the Nile basin. Second, it presents patterns of Nile water consumption by the various basin states. Third, the population growth in the basin states is discussed along with its future implications.

EGYPTIAN WATER DEVELOPMENT PROGRAMS

Modern irrigation and water management systems in the Nile basin date from the reign of Khedive Muhammad Ali in Egypt. A former Albanian soldier of fortune in the

¹²Ibid.; Mamdouh Shahin, *The Hydrology of the Nile Basin* (Amsterdam: Elsevier, 1985), p. 318.

Ottoman service, Muhammad Ali seized control of Egypt by eliminating its *Mamluk* elites in an infamous 1799 massacre, and by 1805, he was in total control of the country . He wanted to modernize Egypt and build an empire. Muhammad Ali understood that realizing his ambitions would require radical restructuring of traditional Egyptian society, economics, politics, and most importantly, agriculture. He redistributed land and ordered the introduction of new crops including fruits, sugar cane and cotton. These new crops required a drastic change in the Egyptian irrigation system. The solution was to set up barrages in the two branches of the Nile that flowed into the Mediterranean, the Damietta and Rosetta. These barrages were designed to hold back water when it flowed at summer levels in order to allow it to flow into canals normally used at high flood levels. Work on the barrages began in 1843 and was completed in 1861. Muhammad Ali died in 1848, long before he saw the success of his scheme. The barrages brought large scale cotton cultivation to Egypt at a time when world cotton prices were very high due to the U.S. Civil War. The success of these early barrages led to the construction of several additional barrages and a dam at Aswan. The first ("low") dam at Aswan was built in 1912 with a storage capacity of 1 cubic kilometer. The Aswan low dam's capacity was expanded to 5.1 cubic kilometers in 1934.¹³

Eager to surpass this early stage of modern water development and construction of barrages and dams in Egypt, the new Egyptian republican government adopted the Aswan High Dam project. The dam was built in 1960 with Soviet support. It stands at 110.7 meters above the river bed, it is 980 meters at the base, and it is 3,820 meters long. The dam's reservoir is designed to hold some 162 cubic kilometers of water, when

¹³Chesworth, "History of Water Use in Sudan and Egypt," pp. 67-69.

the water reaches a level of 175 meters. Electricity can be generated when the reservoir is 146 meters and contains more than 30 cubic kilometers of water. If the water level falls to 123 meters, 6.8 cubic kilometers of water, the lake, given Egypt's use, cannot rise again. "Live storage" is some 90 cubic kilometers, reflected with a water level of 175 meters at the dam. This means that 70 cubic kilometers are not available for use if the hydroelectric generation function of the dam is to continue normally. The dam can produce 1,750 mega-watts of electricity a year.¹⁴ Using the Aswan High dam, as well as the older dams and barrages and their replacements, Egypt irrigates some 2.4 million hectares of Nile Valley old lands and 200,000 hectares of reclaimed land. Egypt's land master plan envisions more reclamation in the future.¹⁵

Water from the dam flows into an ancient, and perhaps inefficient irrigation system. The most basic problem is the reluctance of Egyptian peasants to irrigate at night, when evaporation rates are much lower. In addition, the canal network suffers from decay and negligence. There are 30,000 kilometers of canals in Egypt, and many of these canals have not been converted from open ditch irrigation to underground piping. During the 1970s, Egypt converted 1.05 million hectares to piped irrigation, but the Egyptian irrigation system remains very inefficient. Estimates for wasted water range from 20 percent to 50 percent of the total used by Egypt every year for irrigation. In

¹⁴Kliot, *Water Resources and Conflict*, pp. 41, 44.

¹⁵Dale Whittington and Kingsley Haynes, "Nile Water for Whom? Emerging Conflicts in Water Allocation for Agricultural Expansion in Egypt and Sudan," in Peter Beaumont and Keith McLachlan, eds., *Agricultural Development in the Middle East* (New York: John Wiley and Sons, 1985), p.125.

terms of cubic kilometers of water, estimates range between 6.7 and 8.0.¹⁶ An appropriate analogy to describe the Aswan High dam and its associated irrigation system would be to liken the project to the motorization of an ox-cart with the latest diesel engine. Clearly, the construction of the dam was motivated by factors outside the realm of water resource utilization and hydrology.

A gigantic dam at Aswan had been proposed in some form or another since 1876. The Aswan High Dam's cause was championed in 1948 by Adrian Daninos, an Egyptian-Greek engineer. Daninos' proposals were rejected by Dr. H.E. Hurst, the British hydrologist in control of the Egyptian irrigation service. After the 1952 revolution, Daninos found a more receptive audience among the ruling Free Officers. Hurst's grounds for rejecting the Aswan High Dam were sound from the perspective of water resource management. Hurst pointed out that a reservoir behind the Aswan high dam would lead to tremendous water losses due to evaporation.¹⁷ Hurst's critique of the Aswan High Dam project has been validated by the dam's evaporation statistics. The evaporation and seepage figure for 1986 is low primarily because the reservoir contained only half its water storage capacity, consequently, there was less evaporation and seepage.¹⁸ The full significance of these losses cannot be understated. These losses represent a significant

¹⁶Kingsley Haynes and Dale Whittington, "International Management of the Nile - Stage Three?" *The Geographical Review*, Vol. 17, No. 1 (1981), p. 24; Kliot, *Water Resources and Conflict*, p. 62.

¹⁷Robert Collins, "History, Hydropolitics, and the Nile: Nile Control: Myth or Reality?" in P. Howell and J. Allan, eds., *The Nile* (London: School of Oriental and African Studies, 1994), p. 119.

¹⁸Roy Stoner, "Future Irrigation Planning in Egypt," in P. Howell and J. Allan, eds., *The Nile*, (London: School of Oriental and African Studies, 1994), p. 196.

drain on Nile resources. For example, Sudan's entire annual share of Nile waters, as per its 1959 treaty with Egypt, is 18.5 cubic kilometers.¹⁹

Table 3: Evaporation and Seepage From The Aswan High Dam Reservoir: Lake Nasser/Lake Nubia for selected years.

Year	Storage (end of July)	Cubic Kms. Lost	Year	Storage (End of July)	Cubic Kms. Lost
1970	45.4	9.3	1980	103.1	12.8
1972	69.2	12.4	1982	99.1	12.5
1974	67.0	10.8	1984	72.9	9.7
1976	108.4	15.0	1986	53.7	5.7
1978	109.0	13.9	1988	41.4	12.5*

SOURCES: Egyptian Ministry of Public and Works and Water Resources as cited by Chesworth, "History of Water Use in Sudan and Egypt," p. 76; 1988 figures are an estimate by Kliot in *Water Resources and Conflict*, p. 44; storage figures are from Stoner, "Future Irrigation Planning in Egypt," p. 197.

A second major problem with the Aswan High Dam is the risk, illustrated in 1986-1988, of its fall to dead-storage levels as a result of drought in Ethiopia and/or the Great Lakes region. Dead storage is the level from which a dam's reservoir, given normal use, cannot rise from again and at which it would not be possible to use water. A second problem with the Aswan High Dam is the risk of the collapse of water levels to "dead storage" levels during years of extended droughts in upstream areas. In fact, Egypt nearly faced a "dead storage" crisis during the dam's earliest years. Explaining the filling of the reservoir, Roy Stoner, an irrigation engineer at the University of Southampton, argues

¹⁹Dale Whittington and Elizabeth McClelland, "Opportunities for Regional and International Cooperation in the Nile Basin," *Water International*, Vol. 17 (1992), p.146.

that the Sudan would have been able to prevent the reservoir's creation simply by drawing on its allotment during the seventies:

A great deal of the rise [of the Lake Nasser reservoir] was attributable to two very good years, the floods of 1974 and 1975. What is interesting from Egypt's point of view is that if the Sudan had taken only 5 kms³ per annum extra during this period, the lake would have fallen to its dead storage level of 30 kms³ by about 1983 and would never have risen above it thereafter, even allowing for the large flood of 1988. Measures for the Sudan which will perhaps enable that country to use its full allocation of 18.5 kms³ in the future are under consideration. If that is indeed achieved and the modest Nile flows do not improve, then Egypt will suffer very serious shortages.²⁰

Aside from seepage and the risk of "dead storage," the Aswan High Dam brought about some devastating changes to the natural environment. The Nile does not merely stop at Aswan, as Nasser claimed, it effectively dies as an ecosystem. The dam has had ten primary environmental consequences. First, no water is left for natural ecosystems, and the drainage to the sea serves only to flush out agricultural, industrial, and urban effluents. Second, the silt that once fertilized Egypt is now accumulating in Lake Nubia – the Sudanese side of the Aswan High Dam reservoir. Third, the dam's silt-free water is eroding the Nile's river-bed downstream, and new dams need to be built to control this problem. Fourth, the absence of the silt means that Egyptian farmers are forced to use chemical fertilizers, which are costly to produce and/or import. Fifth, with the absence of replenishing silts, the fertile Nile Delta is being lost to the sea. Sixth, the controlled, regular slow flow of water in the river is altering the soil along its banks, because the soils were exposed to a river with a variable water level before the dam. Seventh, the sixth factor, when combined with fertilizers and other chemicals, has drastically changed

²⁰Stoner, "Future Irrigation Planning in Egypt," p. 197.

the river's aquatic life. Eighth, without its annual flood, the Nile no longer flushes clean, and in the region around Cairo, it has become extremely polluted. Ninth, water pumped into dam-associated desert land reclamation projects seeps through the desert's salty crust into the water table below. While the water table rose by four meters, it has also become brackish. Tenth, the Mediterranean Sea fish species that depended on silt for food have now disappeared, but fish production at Lake Nasser largely replaces this loss.²¹ The Aswan High Dam continues to cost Egypt a great deal of money and environmental well-being.

There were, and still are, alternatives to the Aswan High Dam. Hurst advanced a "Century Storage" or the "Equatorial Nile Project" plan that stored water for Egyptian and other riparian use in Lake Albert and other equatorial lakes where the geology allows for storing vast amounts of water with little increase in the water surface exposed to evaporation. In addition, equatorial storage offered the benefit of using rainfall to substitute for evaporation. Hurst's planning emphasized the need to treat the river as a complete system; under Hurst's plan, all the water projects needed to be coordinated by all the basin states. Hurst estimated that "full Nile control" can be accomplished through a basin-wide storage capacity of 500 cubic kilometers. Terry Evans, a British hydrologist, updated Hurst's work in 1994. Evans argues that full Nile control would require a storage capability of 600 cubic kilometers. Furthermore, using Hurst's K, a statistic used to correct the tendency of the Nile to consistently have longer periods of drought and flood than would be predicted by statistical theory, Evans argues that the

²¹Christiaan Gischler, *Water Resources in the Arab Middle East and North Africa* (Cambridge: Middle East and North Africa Press Ltd., 1979), pp. 22-24.

Nile's reliable yield at Aswan is 78 cubic kilometers a year.²² Currently, the Sudan and Egypt presuppose an annual yield of 84 cubic kilometers. Hurst's suggestions have found an audience in the post-imperial policy-making world. Shortly after Sudanese independence in 1956, the Sudanese government hired two British hydrologists, H. A. Morrice and William Allan, as its irrigation advisors. Allan and Morrice used the newly available IBM computer technology to model Nile hydrology. The result was a modernized and more sophisticated version of Hurst's plan. Like the Hurst plan, it envisioned storing water in the equatorial lakes and the construction of Canal to drain the Sudd swamps. The Sudanese government called the new plan the Nile Valley Plan. The plan was "vehemently rejected" by Egypt.²³

Another alternative was developed by Ethiopia and the United States Bureau of Reclamation between 1958 and 1964. While relatively inexperienced in the region, especially when compared with British bureaucracies, the U.S. Bureau of Reclamation nevertheless produced a very thorough and detailed study of the Ethiopian Blue Nile region encompassing "its hydrology, water quality, geology, physiography, mineral resources, sedimentation, land use, ground water, and local economy."²⁴ After completing its 17 volume study, *Land and Water Resources of the Blue Nile Basin: Ethiopia*, the Bureau recommended that Ethiopia construct four dams on the Ethiopian Blue Nile. These dams were to have a combined storage capacity of 51 cubic kilometers

²²Evans, "History of Nile Flows," pp. 50-51.

²³Collins, "History, Hydropolitics and the Nile," pp. 120-121.

²⁴Giorgio Guariso and Dale Whittington, "Implications of Ethiopian Water Development for Egypt and Sudan," *Water Resources Development*, Vol. 3 (1987), p. 111.

and a hydroelectric power generation capability of 25 billion kilowatt-hours or roughly three times the electricity produced by the Aswan High Dam. From these reservoirs, Ethiopia was to use 6 cubic kilometers a year to irrigate 434 ,000 hectares of land. The effects of these dams on downstream states were studied by the Bureau of Reclamations. The Bureau calculated that the Blue Nile flow into the Sudan would be reduced by 8.5 percent or about 4 cubic kilometers.²⁵

Ethiopia's plans caused alarm in Egypt. But, Egypt's alarm about forthcoming hydrological catastrophes, were unfounded. Collins, Whittington, and McClelland argue that the Ethiopian dams, if well managed, would increase the water available to Egypt and the Sudan. To a great extent, the Bureau of Reclamations' plan paralleled the Nile Valley plan initially endorsed by the Sudanese government. Both plans involve storing water in areas of little evaporation and would lead to substantial water savings from evaporation alone. As 1986 showed, when the Aswan High Dam reservoir is low, losses from seepage and evaporation are very low. Under the Ethiopian/U.S. plan, Egypt and the Sudan would receive more water than they currently unilaterally allocate for themselves.²⁶ Despite these obvious benefits, Egypt totally rejected these plans and pressured the Sudan to sign the 1959 Nile Waters agreement endorsing the construction of Aswan High Dam. From a hydrological standpoint, constructing a dam at Aswan constitutes immense and unjustifiable waste in terms of seepage and evaporation. Collins

²⁵Dale Whittington and Elizabeth McClelland, "Opportunities for Regional and International Cooperation," p. 149; Collins, "History, Hydropolitics and The Nile," p. 123-124; U.S. Department of the Interior, Bureau of Reclamation, *Land and Water Resources of the Blue Nile: Ethiopia* (Washington, D.C.: U.S. Government Printing Office, 1964).

²⁶*Ibid.*

explains that Egypt's motives for constructing the Aswan High Dam were political, not hydrological:

That both the Sudanese and Egyptian allocations could still be higher is simply due to the Aswan reservoir being operated at relatively low levels, thus reducing evaporation losses below the estimates of the treaty ([Guarsio,] p. 112). Egypt, however, would not be the beneficiary of additional water in years of high flood, which would then be stored and regulated in the Blue Nile reservoirs, not at Aswan. Moreover lowering the level of Lake Nasser in order to limit the evaporable loss would concomitantly reduce the hydroelectric power, but in return, Egypt would receive additional water for irrigation. Ethiopia could, of course, malevolently withhold water it did not need in a year of low rainfall to threaten disaster in the Nile Valley. The Egyptians have historically deeply feared this threat to their survival, and such an action would be tantamount to an act of war. It was just such a fear, in the jungle of predatory nation states, which determined the construction of the High Dam at Aswan.²⁷

Political domination of the hydrological agenda in Egypt extends to the reclamation efforts discussed in brief earlier. While Egypt attempts to make its deserts bloom, the vast, fertile clay plains of central Sudan lie thirsty for irrigation water. Two analysts who studied the politics of Nile water, Dale Whittington and Kingsley Haynes, conclude "that if Egypt and Sudan were one country, "no one would seriously consider Egypt's current plans for massive reclamation of desert lands while deep clay soils of the Blue Nile plain lay idle."²⁸ As illustrated by Hurst's objection to the dam, the arguments against the dam have had a long and largely un-refuted history. Thinking along Hurst's lines, John Foster Dulles ended United States support for the Aswan High Dam project,

²⁷Collins, "History, Hydropolitics and the Nile," p. 124.

²⁸Whittington and Haynes, "International Management of the Nile," p. 142.

because he considered it a dangerous economic and ecological endeavor that would taint the United States in the minds of the Egyptian public.²⁹

SUDANESE WATER DEVELOPMENT PROGRAMS

Like Ethiopia, the Sudan has plenty of rain-fed agriculture and is far less dependent on the Nile. Generally speaking, the Sudan is fortunate to enjoy a substantial quantity of rain, especially in the Al-Gadarif area near the Ethiopian border. Of the 11.2 million hectares under cultivation in the Sudan, 9.5 million are rain-fed. The best soils in the Sudan, however, lie within the White and Blue Nile catchment basins, and the Sudan's rain-fed agriculture is vulnerable to the same droughts that have plagued Ethiopia during the last twenty years. Consequently, the Sudan cannot afford to ignore irrigation altogether.³⁰ There are three dams and associated irrigation schemes in the Sudan. Egypt's goals and agendas dominate dam and irrigation projects in the Sudan. Even when both countries were under British influence or rule, Egyptian priorities came first. In a 1925 letter to Ziwar Pasha, the Egyptian Prime Minister, the British High Commissioner, Lord Allenby, reassured the Egyptians that their interests were paramount, despite Britain's plans to construct a dam on the Blue Nile for the Gezira scheme:

I need not remind your Excellency that for forty years the British government watched over the development of the agricultural well being of Egypt, and I would assure your excellency at once that the British Government, however solicitous for the prosperity of the Sudan, have no

²⁹Peter Rodman, *More Precious Than Peace: The Cold War and The Struggle For the Third World*, (New York: Charles Scribner's Sons, 1994), p. 75.

³⁰Kliot, *Water Resources and Conflict*, p. 65; Whittington and Haynes, "International Management of the Nile," p. 130.

intention of trespassing upon the natural and historic rights of Egypt in the waters of the Nile, which they recognize today no less than in the past.³¹

As pro-Egyptian as the British were, at the very least they acquired an admission from Egypt that the Sudanese were entitled to some of the water through the 1929 Nile Waters agreement. In addition, the 1929 agreement left a vast amount of water unallocated. As the Aswan Dam and the Egyptian-imposed 1959 Nile Waters agreement later proved, the upstream states lost the ability to use British bureaucracies to restrain Egypt with the advent of de-colonialization and the erosion of British power. These two treaties will be discussed at length in the section pertaining to regimes, but they are crucial to understanding Sudanese water development projects.³²

There are four dams located within Sudanese territory. Of these, the Jebel Aulia dam is reserved for Egyptian use. The dam was built in 1937 thirty miles South of Khartoum to provide Egypt with "timely water." This meant storing water for release into the White Nile when its levels fall down. The Jebel Aulia Dam can hold 5.5 cubic kilometers, but it suffers from a very high evaporation rate of 2.8 cubic kms.³³ Upstream from the Jebel Aulia Dam, several pump schemes have sprouted over the years. These technically serve 182,000 hectares, but in reality, the effective area of the Jebel Aulia Dam is 41,000 hectares. It is important to remember that the dam's primary purpose is to regulate water for Egypt, and Sudanese use of the Jebel Aulia Dam is a secondary priority

³¹Edmund Henry Allenby, British Viscount and High Commissioner of Egypt, as cited by John Waterbury, *Hydropolitics of the Nile Valley* (Syracuse, NY: Syracuse University Press, 1979), p. 65.

³²Kliot, *Water Resources and Conflict*, p. 37.

³³Whittington and McClelland, "Opportunities for Regional and International Cooperation," p. 150.

for the dam. The pumping equipment is in disrepair, and the low levels of the White Nile during September preclude the full utilization of the dam for Sudanese irrigation.³⁴

The Sennar Dam is the oldest dam in the Sudan, built in 1925 to provide water to the Gezira-Managil irrigation scheme. The scheme is the largest singly-administered irrigation program on earth, covering 880,000 hectares. This land is mainly used to grow cotton, which is the Sudan's principal cash crop. The second largest irrigation scheme in the Sudan is the Khashm al-Girbadam irrigation project. The project was completed in 1966 on the Atbara river, a tributary of the main Nile. The Khashm Al-Girba Dam can hold some 1.3 cubic kilometers of water, but siltation has reduced the dam's capacity to about a third of the original planned amount. Similar problems haunt the Sennar Dam. The Roseires and Khashm Al-Girba dams were built with Egyptian support in order to compensate Sudan for the displacement of its citizens who lived in the old Halfa region, now covered by Lake Nubia/Lake Nasser reservoir of the Aswan High dam. The New Halfa irrigation project was designed to cover 164,000 hectares in the Atbara River area. Salinity, siltation, and drainage problems have drastically reduced the effective area of the project. The Khashm Al-Girba, Sennar, and Roseires dams generate 12, 15, and 250 mega-watts of electricity respectively -- the three dams have been the backbone of Sudan's power grid. Located on the Blue Nile, upstream from the Sennar dam, the Roseires dam, with a storage capacity of 2.4 cubic kilometers, is also used for irrigating

³⁴Ibid.

the 64,000 hectare Rahad project. A canal carries the water from the reservoir to the Rahad River where it is pumped out to the irrigated area.³⁵

These projects were built with Egyptian support. Indeed, Egypt traditionally views the Sudan as its "backyard."³⁶ These projects were built to benefit Egypt and not the Sudan and the Sudan's own preferences were sidelined. Soon after the Sudan proposed the Hurst-inspired Nile Valley plan, Egypt began a propaganda campaign against the Sudanese government. Egyptian propaganda extolled the Aswan High Dam and the unity of the Nile Valley. After Egypt failed to force Sudan from its positions over the Aswan High Dam and the Nile Valley Plan, it attempted to launch a military expedition to annex disputed territory in the Sudan and failed. Thereafter, Egypt moved to impose economic sanctions against the Sudan. The ensuing unrest in newly independent Sudan led to the country's first *coup d'etat* on 17 November 1958. The new Sudanese leader, Major General Ibrahim Abboud, signed an agreement with Egypt over division of Nile waters under terms favorable to Nasser. The resulting 1959 Nile Waters Agreement increased the water allotments to both Egypt and the Sudan and reduced the unallocated water quantity to nil. The Sudan received Egypt's consent and support for building the Roseires and Khashm Al-Girba dams. More importantly, the agreement set the ground for a 50-50 water split for any additional waters conserved in the Sudan.³⁷

³⁵David Knott and Rodney Hewett, "Water Resources Planning in the Sudan," in P. Howell and J. Allan, eds., *The Nile* (London: School of Oriental and African Studies, 1994), p. 209-211; Robert Collins, "The Economy," in Helen Metz ed., *Sudan: A Country Study* (Washington, D.C.:U.S. Government Printing Office, 1992), pp.148-150.

³⁶Bulloch and Darwish, *Water Wars*, p. 110.

³⁷Kliot, *Water Resources and Conflict*, p. 87; Collins, "History Hydropolitics and the Nile," p. 121.

It was this important provision that led to the latest and perhaps the most catastrophic water project in the Sudan, the Jonglei Canal. Hurst envisioned the Jonglei Canal as a part of his "Century Storage" proposal. Without canalizing the Sudd swamps in South Central Sudan, any Great Lakes water storage plans would be useless, argued Hurst. If Great Lakes storage were to be worthwhile, the Sudanese Sudd swamps had to be canalized.³⁸ The first stage of latter-day incarnation of the Jonglei Canal was not linked to Hurst's upstream storage proposals. In essence, the contemporary plan proposed transferring water out of the Sudd swamps without entailing savings elsewhere in the system. As proposed by the Sudanese-Egyptian Permanent Joint Technical Commission on the Nile (PJTC), stage I of the canal would extend from the Dinka village of Jonglei to the point where the Sobat River flows into the White Nile. Storage in Lake Albert is relegated to stage II of the current scheme. The canal would vary in width between 28 to 50 meters. It was to have a depth of 4-7 meters and a water flow rate of some 3.5 kilometers an hour. While first proposed in 1904, the canal could not be built without a significant improvement in digging technology. Developing the required technology took until the sixties. The German firm of Orenstein and Koppel accomplished the required technological breakthrough by designing and building the "Bucketwheel" for the French firm, *Compagnie de Constructions Internationale* (CCI). Used to dig a canal in Pakistan in 1964, the machine weighs 2300 tons and is over five stories high; it moves across eight caterpillar tracks. The most important part of the Bucketwheel is its laser-guided digging wheel, equipped with 12 buckets. By June 1978,

³⁸H. E. Hurst, *The Nile: A General Account of the River and the Utilization of Its Waters* (London: Constable, 1957) pp. 304-309.

the Bucketwheel came back to life on the Sudd's swampy floodplain, called *toic* by its Nilotic inhabitants -- the Dinka, the Nuer and the Shilluk.³⁹

While the problems associated with the canal appeared in the discourse of the rebel Southern Sudanese People's Liberation Army, the canal did not cause the civil war. The SPLA put the Bucketwheel out of commission in 1983. It sits today on the *toic* at the canal's 267th kilometer, rusting into oblivion. Even if peace were to come to the Sudan, it is unlikely that the canal can ever be completed given the financial condition of the Sudan and the decay of the completed sections of the canal. It is clear that the economic costs of the Jonglei Canal were enormous for the Sudan, both in terms of economic hardships for the local residents and the social rents that needed to be paid in order to secure their cooperation. More importantly, the canal was extremely expensive to the Sudan in terms of political stability and peace. The Sudan was to share some 3.8 cubic kilometers on an equal basis with Egypt at Aswan as a consequence of the canal. According to Israeli water scholar Nurit Kliot, the Sudan's best interests lie in reaching accommodation with Ethiopia over the Blue Nile and concentrating on the clay plains in Central Eastern Sudan. The plains of the Blue Nile are very fertile. These plains are largely populated by Arabic-speaking peoples, and they would be safe from the SPLA or a future independent state in Southern Sudan. Yet, the Sudan does not seem to develop

³⁹Collins, "History, Hydropolitics and the Nile," pp.126-128; Whittington and McClelland, "Opportunities for Regional and International Cooperation," p. 148; Thomas Ofcansky, "Historical Setting: Independent Sudan," in Helen Metz, ed., *Sudan: A Country Study* (Washington, D.C.: US Government Printing Office, 1992), pp. 34-36.

its water resources with its interests in mind. Kliot remarks that "the Sudan has subjected her will to Egypt and may do so again."⁴⁰

Properly understood, Sudan's water development projects are largely a function of Egyptian policy. When the Sudan attempted to pursue its own interests in 1958, Egypt invited a *coup d'etat*. While Egypt is probably capable of using military force to defeat the Sudan and any other Nile basin states, imposing a water regime favorable to its needs can be guaranteed only through the military occupation of areas in the remote mountain vastness of Ethiopia and the swamps of the upper Nile--a very expensive proposition.⁴¹ So why does the Sudan constantly defer to Egypt with regard to water development policy? Why does Egypt view the Sudan as its backyard? The questions about Jonglei and the Sudan's general policy of cooperation with Egypt are directly related to the primary research question of this study, because these questions target the conditions that lead to co-operative behavior.

ETHIOPIAN WATER DEVELOPMENT PROGRAMS

Unlike Sudanese water programs, Ethiopian projects do not usually enjoy Egyptian approval. Traditionally, news of Ethiopian water projects is greeted with alarms, or threats of war, or by both, in Cairo. As stated earlier, Ethiopia's agriculture is primarily rain-fed. But, the droughts of the last two decades have harmed Ethiopia's traditional agricultural sector. Generally speaking, Ethiopia has been pursuing the

⁴⁰Collins, "History, Hydropolitics and the Nile," p. 127; Kliot, *Water Resources and Conflict*, pp. 57, 68-69, 71.

⁴¹J. Anthony Allan, "Evolving Water Demands and National Development Options," in P. Howell and J. Allan, eds., *The Nile* (London: School of Oriental and African Studies, 1994), p. 308.

development of hydroelectric power. By 1994, Ethiopia had acquired the ability to produce 400 MW of electricity a year. In addition to its portion of the Nile basin, Ethiopia has some smaller rivers that run largely within its own territory into Kenya and Somalia. All told, Ethiopia has the theoretical potential to produce 4,000 MW of electricity a year. There are only two operational Ethiopian Nile development projects, and both are primarily designed for hydro-electric power generation. The first power station, *Tis-Issat*, is located 25 kilometers from the Blue Nile's outlet from Lake Tana. The second completed Ethiopian project on Blue Nile is the Fincha hydroelectric plant with a capacity to generate 100 MW of electrical power a year. The Fincha reservoir is also being used for irrigation. It can hold only 0.3-0.5 cubic kilometers of water. Ethiopia uses the Fincha dam and other minor projects to draw about 1.0 cubic kilometers for irrigation.⁴²

With regard to future irrigation projects, Ethiopia may attempt to claim 40 cubic kilometers of Blue Nile water a year.⁴³ Yet, it is not entirely clear how and to what extent Ethiopia will proceed with irrigation projects. Only one concern is clear, Ethiopia plans to charge users for irrigation water. Otherwise, the country is uncertain with regard to the proper approach to developing irrigation projects. Installing a modern high-technology irrigation system requires \$10,000-\$15,000 of public investment per hectare. Clearly, Ethiopia cannot afford such expenditures. More substantially, in terms

⁴²Zewdie Abate, "The Integrated Development of Nile Basin Waters," in P. Howell and J. Allan, eds., *The Nile* (London: School of Oriental and African Studies, 1994), p. 229; Kliot, *Water Resources and Conflict*, pp. 66-67; Jovanovic, "Ethiopian Interests," p. 84.

⁴³Jovanovic, "Ethiopian Interests," p. 85.

of plans and projects, Ethiopia is already planning to develop hydroelectric power stations on the Blue Nile. There are 12 such power stations already in the planning stage. About 80 percent of Ethiopia's planned hydroelectric power generation capacity will be located in the Blue Nile Basin.⁴⁴ Ethiopia seems to believe that hydroelectric power is easier to develop, because it can be exported; thus, these programs can, eventually, pay for themselves.

Ethiopia has constantly asserted its right to use the Blue Nile for the benefit of its population in several international fora since 1957. During the 1977 UN Water Conference in Mar de Plata, Argentina, Ethiopia argued that it had the right to develop the Blue Nile independently. Ethiopia pointed out that Egypt constructed the Aswan High Dam without consulting Ethiopia. At various other times, Ethiopia has offered plans for irrigating various tracts of land in the Blue Nile and Baro-Akobo (known as the Sobat in the Sudan) basins.⁴⁵ As mentioned earlier, these irrigation and hydroelectric plans are not being well received in Cairo. Egypt's sensitivity to Ethiopian Blue Nile development projects cannot be overstated. Egypt's reactions occur both at a political and hydrological-professional level. For example, Sadat threatened war with Ethiopia over the Blue Nile,⁴⁶ and Egyptian hydrologists have traditionally reacted with

⁴⁴Abate, "The Integrated Development," pp. 230-231.

⁴⁵Kliot, *Water Resources and Conflict*, pp. 67-68.

⁴⁶Waterbury, *Hydropolitics*, p. 78.

unrestrained passion at the very suggestion that any other country may have a legitimate claim on Nile waters, especially when the country in question is Ethiopia.⁴⁷

UGANDAN AND GREAT LAKES WATER DEVELOPMENT PROGRAMS

Egypt's attitude towards Ethiopia contrasts sharply with its earlier policy towards Ugandan water development programs. During the short interval of time when Hurst's integrationist outlook was official Egyptian policy in the late forties and early fifties, the British government representing its dependencies in East Africa (Uganda, Tanganyika, and Kenya) reached an agreement with Egypt that allowed Uganda to build the Owen Falls Dam. Egypt agreed to compensate Uganda for a portion of the dam's cost, because it could be used for storing water in Lake Victoria for the benefit of Egypt. Negotiations for the agreement began in 1948 and were concluded in January 1953. The technical form of the agreement, called the "Draft Heads Agreement," had been reached in 1948. The Owen Falls Dam raises the water level of Lake Victoria by one meter; as a result, the lake holds an additional 68 cubic kilometers of water. The purpose of the Owen Falls Dam is hydroelectric power generation. The dam can generate 1,150 MW of electricity a year.⁴⁸

The Owen Falls Dam's success can be attributed to the fact that Britain controlled Egypt and had managed to make Hurst's plan official Egyptian policy. As long as Egypt, the Sudan, and the British East African dependencies remained under British control, the 1929 Nile Waters agreement also remained law in East Africa. The exchange of notes

⁴⁷Mamdouh Shahin, "Discussion and Response: Discussion of the Paper Entitled 'Ethiopian Interests in the Division of the Nile River Waters,'" *Water International*, Vol. 11 (1986), pp. 16-22.

⁴⁸Kliot, *Water Resources and Conflict*, pp. 39, 50.

between Britain and Egypt prohibited developing Nile resources, "save with the previous agreement of the government of Egypt." By the mid-fifties, however, the British governments in East Africa quietly moved towards exploring the issue of irrigation. A British hydrological firm was hired by the East African governments. Sir Alexander Gibb and Partners, conducted a survey of Uganda and the Nile regions of Tanganyika and Kenya. Gibb and partners recommended the use of 1.31 cubic kilometers to irrigate various areas in East Africa. Other irrigation projects and contingencies called for an additional 0.394 cubic kilometers of water. All told, the three rain-rich East African territories claimed 1.704 cubic kilometers of water. After the "Free Officer" coup in Egypt, the Suez crisis, and the humbling of independent Sudan in 1958, the prospects of having Egyptian cooperation quickly melted away. The British East African governments attempted to initiate dialogue with Egypt and the Sudan at the time of the 1959 Sudanese-Egyptian Nile Waters Agreement, but these efforts failed. Egypt and the Sudan refused to recognize the right of the East African states to any Nile Water. Egypt and the Sudan stated that, under the 1929 agreement, these countries have a right to excess water--water not used by the downstream states. Furthermore, the Egyptians and their new Sudanese allies argued that since no "excess water" existed, the East African countries were not entitled to any water.⁴⁹ Given subsequent stances taken by Egypt and the Sudan, Uganda was extremely fortunate to have been able to build the Owen Falls Dam.

⁴⁹Paul Howell, "East Africa's Water Requirements: The Equatorial Nile Project and the Nile Waters Agreement of 1929. A Brief Historical Review," in P. Howell and J. Allan, eds., *The Nile* (London: School of Oriental and African Studies, 1994), pp. 85, 88-89, 96, 98-103.

With independence in the early sixties, the three former British East African states began to react to the positions taken by Egypt and the Sudan. President Julius Nyerere of Tanganyika (renamed Tanzania after its union with Zanzibar) announced the "Nyerere Doctrine." Under that doctrine, independent Tanganyika refused to recognize any agreements signed by Britain on its behalf. Furthermore, Nyerere insisted that Tanganyika had a right to develop its water resources as it saw fit, without consulting other countries. Uganda and Kenya followed Tanganyika's lead shortly thereafter. While some analysts, such as Robert Collins, blame the Nyerere doctrine for the destruction of the Equatorial Nile Project and various other forms of Hurst's intergrationalist approach, blame probably should be assigned much further downstream. By 1959, Britain itself was considering abrogating the 1929 Nile Waters agreement when it learned that Egypt and the Sudan were planning to divide the river without consideration for the needs of the British East African dependencies.⁵⁰ Despite being rhetorically based in nationalism, the Nyerere Doctrine does not represent a radical, nationalist departure in East African foreign policy. It is simply the implementation of policies that Britain was already considering at the time of its departure from East Africa.

Currently, the three former British East African states use the 1.7 cubic kilometers of water they proposed to the Egyptians and the Sudanese in the fifties. In addition, they may be using an unknown quantity (6-7 cubic kilometers?) of Lake Victoria's water for lake-side agriculture; unfortunately, no data exists with regard to the proportion of water actually drawn from the lake for irrigation, and it may be that lake-side agriculture simply uses the fertile shore soils and relies on rain for watering. Kliot estimates that Uganda,

⁵⁰Ibid., p. 96; Collins, "History, Hydropolitics and The Nile," p. 122.

Kenya, and Tanzania will increase their use of Nile water to 2 cubic kilometers. The primary water source for these projects will be flood control waters and hydroelectric plants. But these countries are not the only Central African Great Lakes states planning to use Nile-related waters. The Kagera Basin Agreement envisions using the Kagera river, the main tributary of Lake Victoria, to irrigate 90,000 hectares and to increase the use of water in an additional 200,000 hectares. Tanzania, Rwanda, Burundi, and Uganda are the signatories. Aside from irrigating various areas of land, the Kagera Basin Agreement includes a planned hydroelectric power station at Rusumo Falls. The agreement foresaw the use of 2 cubic kilometers of water, but it could not be implemented due to insufficient resources and civil war in Rwanda and Burundi.⁵¹

Surprisingly, Egypt and the Sudan have not been as uncooperative with these three states as they have been with Ethiopia. While Egypt and the Sudan rejected an East African claim for 5 cubic kilometers of water in 1961, they clearly have an interest in flood control--an area in which their interests partially overlap with those of the Great Lakes states. The Central African Great Lakes states have created some regimes to develop their Nile resources and to equalize their negotiating position *vis-a-vis* the Sudanese-Egyptian Permanent Joint Technical Commission. Aside from the Kagera Basin Agreement, the Lake Basin Development authority (LBDA) has been created. The LBDA includes the three states of former British East Africa.⁵² The study discusses the role and extent of the major regimes in another section. The Owen Falls Dam is the last major water development program that needs to be discussed by this study. The next

⁵¹Kliot, *Water Resources and Conflict*, pp. 69-70.

⁵²*Ibid.*, p. 83; Howell, "East Africa's Water Requirements," p. 103.

focus of this section will examine the water use patterns that result from the complex infrastructure installed in the Nile basin.

PATTERNS OF WATER USE IN THE NILE BASIN

The infrastructure built by and for the benefit of Egypt leads to lopsided Egyptian advantage in terms of water consumption patterns. Egyptian and Sudanese consumption is governed by the 1959 Nile Waters Agreement between Egypt and the Sudan. Ethiopia consumes one cubic kilometer of Nile water, while the three former British East African states are known to consume at least 1.7 cubic kilometers. The Kagera Basin Agreement has not been fully implemented, and no data is available for Rwanda and Burundi's consumption of Nile-bound waters. While Egypt sometimes helps itself to waters left unused by the Sudan, it generally abides by its quota. But, the reality of the quota is "softer" for Egypt than it is for the Sudan. The quota is based on the average annual Nile discharge between 1900 and 1959. If the figures available for the 46 years preceding 1900 were included in the average, the Nile's average discharge would be calculated at 91 cubic kilometers with a standard deviation of 16.8 cubic kilometers a year. With the Sudan bound not to use 18.5 cubic kilometers a year, Egypt can reap a vast water bonus during flood years. During drought years, Egypt can still insist on using its full quota. Properly understood, the Egyptian "quota" is really a floor figure for Egyptian water use.⁵³

Egypt reuses some of its water every year. In 1990, Egypt enjoyed 12 cubic kilometers of return flow water from agricultural and urban use. Egyptian wells provided an additional cubic kilometer of groundwater. Egypt utilizes some 68.5 cubic kilometers

⁵³Haynes and Whittington, "International Management of the Nile," p. 19-20.

a year, not counting the losses from evaporation and seepage. These figures do not include any additional waters that may arrive at Aswan during wet years.⁵⁴ These factors, combined with the unknown quantity of water that is used at the shores of Lake Victoria and unknown consumption figures for Rwanda and Burundi, render the table below nominal in some respects. The most important pattern that emerges from the table is Egypt's dominance in water consumption.

Table 4: Contribution and Consumption of Nile Waters by States or Regions (in cubic kilometers).

Country or Region	Water Contribution	Water Use
Egypt	0	55.5
Sudan	minimal	18.5
Ethiopia	72.0	1.0
Great Lakes States	12.0	1.7

SOURCE: Whittington and McClelland, "Opportunities for Regional and International Cooperation in the Nile Basin," p. 146.

AGRICULTURAL AND DEMOGRAPHIC TRENDS

Despite nearly monopolizing the Nile, Egypt leads the basin in food imports. The country is forced to devote one third of its imports for food. Eighty percent of Egypt's export revenues are devoted for food imports. Today, these food imports include some 75-80 percent of the cereals consumed in Egypt. In 1974, only four years after the completion of the Aswan High Dam, Egypt became a net importer of food and by 1981, the country was importing 48 percent of its food.⁵⁵ Egypt has been forced to increase its

⁵⁴Ibid., p. 22.

⁵⁵J.A. Allan, "Evolving Water Demands and National Development Options," in P. Howell and J. Allan, eds., *The Nile*, (London: School of Oriental and African Studies,

food imports because its population has grown dramatically. The rate of population growth in Egypt is about one million people every nine months. Population growth is a vital aspect of any discussion concerning Nile water, because Egypt uses 88 percent of its water for agriculture. Agriculture, of course, is essential for keeping any population alive and well.⁵⁶ Egypt has been forced to import food despite the fact that it has been able to increase agricultural production at a rate that matched population growth in the 1980s. Other countries in the basin have also seen their populations rise at a meteoric pace during the twentieth century. The table below, devised by Kliot, highlights the food problem facing the entire basin:

Table 5: Nile Population Growth and Agricultural Productivity. Population in Millions.

Country	Pop. 1990	Pop. 2000	% Pop. Av. Gr. Annual 85-90	% Pop. Av. Gr. Annual 95-2000	% Agr. Av. Gr. Annual 1980-7	Food Prod. Per Capita (79-80=100) 88-90
Ethiopia	49.2	66.4	2.6	2.9	-2.1	85
Tanzania	27.3	39.6	3.6	3.6	3.8	88
Burundi	5.5	7.4	2.9	2.9	1.7	95
Uganda	18.8	27.0	3.6	3.4	-0.5	92
Rwanda	7.2	10.2	3.4	3.4	1.1	76
Kenya	24.0	35.1	3.5	3.8	3.4	107
Sudan	25.2	33.6	2.8	2.8	0.8	75
Egypt	52.4	64.2	2.4	1.9	2.7	123

SOURCE: Kliot, *Water Resources and Conflict*, pp. 76-77.

1994) pp. 302-303. Kliot, *Water Resources and Conflict*, pp. 78-79.

⁵⁶ Amikan Nachmani, *Water Jitters in the Middle East*, Security and Policy Studies, No. 32 (Ramat Gan, Israel: The Begin-Sadat Center for Strategic Studies, June 1997), pp. 70, 72.

Of all the states in the basin, only Egypt and Kenya were producing more food per capita during 1988-1990 than they were during 1979-1981. Drought may be a culprit, but increased agricultural output per capita, by itself, does not necessarily translate to food independence or "food security." While Egypt did raise agricultural production by 23 percent on per capita basis between the two time periods, its dependence on foreign imports did not decrease. Instead, the opposite happened, and Egypt today imports more food than ever before. Clover production for meat and work animals may be the culprit, but the increased pressure that population growth puts on the country cannot be denied. Egypt's attempts at using land reclamation to increase production have also failed. Today, the reclaimed lands constitute about 7.7 percent of agricultural land in Egypt, but they produce only 2 percent of all agricultural output.⁵⁷ Egypt's failure to produce enough food led to massive food aid and food importation. Kliot documents this problem in the table below:

⁵⁷Whittington and Haynes, p.129.

Table 6: Food Importation in the Nile Basin.

Country	Cereal Imports 1000s metric tons 1974	Cereal Imports 1000s metric tons 1990	Food Aid 1000s metric tons 74-75	Food Aid 1000s metric tons 1989	Food Aid Millions U.S. \$ 88-89	Food Imports as % of imported Merch. 1990
Ethiopia	118	687	54	573	538	17
Tanzania	431	73	148	76	22	7
Burundi	7	17	6	-	2	18
Uganda	36	7	0	17	35	8
Rwanda	3	21	19	-	7	9
Kenya	15	188	2	112	62	10
Sudan	125	586	46	19	335	18
Egypt	3,877	8,580	610	1,427	1,210	31

SOURCE: Kliot, *Water Resources and Conflict*, p. 77.

These two tables partially reflect the upstream consequences of Egyptian policies. Ethiopia and the Sudan saw their agricultural production decline during the droughts. Setting aside the hardships of civil war, the Sudan was prohibited by treaty from expanding its irrigated areas. While not bound by treaty, Ethiopia could not use the Nile to mitigate famine due to civil war and dire poverty. The droughts did not extend to Central Africa, and most of the states there did not face the famines that haunted Ethiopia and the Sudan in the 1980s. Nevertheless, population growth has weakened all of the basin states, including Egypt. It can be argued that Egypt was able to escape unscathed from these difficulties because it could import food. But Egypt was also the beneficiary of massive aid from its allies abroad. Alliances are rarely eternal, and Egypt may one day

face the problems that currently cripple the upstream states. Egypt's population growth rate is very high, and so is Ethiopia's. Population growth will continue to ravage the whole basin. The United States Bureau of the Census estimates significant increases in the populations of the basin states during the next three decades:

Table 7: Current Population and the 2010 and 2020 Population Projections For Nile Basin States in millions.

Country	1996	2010	2020
Ethiopia	57.17	81.17	100.81
Tanzania	29.06	36.08	40.10
Burundi	5.94	8.23	10.20
Uganda	20.16	26.36	30.87
Rwanda	6.85	10.08	11.04
Kenya	28.18	33.92	35.24
Sudan	31.07	47.51	58.55
Egypt	63.58	80.69	92.35

SOURCE: U.S. Dept. of Commerce, Bureau of the Census, as cited by *The World Almanac and Book of Facts: 1997*, (Mahwah, N.J.: World Almanac Books, 1997), p. 838-839.

These numbers have both agricultural and military implications. The upstream states will face immense pressures to unilaterally develop Nile water resources for hydroelectric power and agriculture at the expense of the decidedly pro-Egyptian *status quo*. Conversely, the larger populations may force these states to cooperate with regard to developing Nile resources along Hurst's line, because cooperation would increase the water available for irrigation and hydroelectric power. Either alternative, though, presupposes a departure from the current state of water consumption in the basin. The

population figures for Ethiopia could be even higher; Abate estimates population figures of 122, 161, and 215 million for 2020, 2030, and 2040 respectively.⁵⁸

Thus far, Egypt has been the only country to openly speak of a military solution to its water problems, and it is very clear that Sadat's audience was the Ethiopian leadership in Addis Ababa. As Ethiopia's population grows, the credibility of Egyptian military threats declines. Countries with large populations can field large armies, and even when defeated, are usually very difficult to control in a direct way for long periods of time. It is difficult to see how Egypt can militarily dictate and control the hydraulic behavior of 215 million Ethiopians in 2040, while at the same time struggling to feed its own population. In contrast, international regimes are certainly a better alternative for reducing conflict and promoting cooperation in the basin. In the following section, this study will concentrate on the historical and current regimes of the Nile basin.

REGIMES

The regimes constructed on the utilization of Nile waters mirror the physical infrastructure constructed on the river. Like the dams in Sudan and Uganda, they reflect Egyptian priorities and preferences. These priorities and preferences do not reflect the current international consensus on the management of common basin resources reflected in the "Helsinki rules." The "Helsinki rules" represent the doctrine of *equitable distribution* of riparian basin water resources. The doctrine postulates that each country in the basin is allowed to use its water resources only to the extent that its use does not harm other countries. Devised in 1966 by the International Law Commission, the

⁵⁸Abate, "The Integrated Development," p. 230.

Helsinki rules, along with rules emanating from two other compatible doctrines, represent the current *status quo* in international jurisprudence referring to international river systems.⁵⁹ There are eleven variables that govern the distribution of water under the Helsinki rules:

- a. the geography of the basin, including in particular, the size of the drainage area in the territory of each basin state;
- b. the hydrology of the basin including, in particular, the contribution of water by each state;
- c. the climate affecting the basin;
- d. the past utilization of the waters of the basin including, in particular, present utilization;
- e. the economic and social needs of each basin state;
- f. the population dependent on the waters of the basin in each state;
- g. the comparative costs of alternative means of satisfying the economic and social needs of each basin state;
- h. the availability of other resources;
- i. the avoidance of unnecessary waste in the utilization of waters of the basin;
- j. the practicability of compensation to one or more of the co-basin states as a means of negotiating settlements over conflicts among users;
- k. the degree to which the needs of a basin state may be satisfied without causing substantial injury to another basin state.⁶⁰

In essence, Kliot's work represents the application of these variables to various Middle Eastern river systems. Very early on in her Nile case study, she concludes that Ethiopia "should be entitled to a large portion of Nile waters."⁶¹ on the basis of the Helsinki rules. The Helsinki rules and related compatible approaches represent the broad

⁵⁹Kliot, *Water Resources and Conflict*, p. 6; Jon Martin Trolldalen, *International Environmental Conflict Resolution: The Role of the United Nations* (New York: UNITAR, 1992), p. 79.

⁶⁰United Nations, *Integrated River Basin Development*, revised edition, (New York: UN Dept. of Economic and Social Affairs, 1970), pp. 78-80; Kliot, *Water Resources and Conflict*, pp. 7-10.

⁶¹Kliot, *Water Resources and Conflict*, p. 28.

international consensus on river basins, but this consensus does not extend to the countries in the Nile basin, because Egypt and the Sudan reject the right of other states to claim a share of the water. As we saw earlier, the three former British East African states have reserved the right to develop Nile waters emanating from within their borders as they see fit. Ethiopia has also consistently asserted a similar position. Sudan and Egypt have been able to cooperate. Sudanese-Egyptian cooperation, however, has been premised on the exclusion of other basin states. Two treaties have defined cooperation between Egypt and the Sudan: the 1929 and 1959 Nile Waters Agreements.

THE 1929 NILE WATERS AGREEMENT

The two contracting parties for this early treaty were Egypt and the United Kingdom. The UK was acting on behalf of the Sudan and the three British East African dependencies. After the assassination of the British Governor-General of the Sudan in Cairo in 1924, the British administration in the Sudan threatened to expand its irrigation projects. In response, Egypt established a small, three-man commission headed by an independent Dutch engineer assisted by one Egyptian and one British engineer. This small Nile Waters Commission produced a number of recommendations that were attached to the 1929 Nile Waters Agreement. The agreement was premised on annual water yield of 84 cubic kilometers. The agreement assigned 48 cubic kilometers to Egypt, 4 cubic kilometers to the Sudan, and left 32 cubic kilometers unallocated. As discussed earlier, the 1929 agreement reflected the priorities and needs of Egypt. Egypt got a virtual veto over the development of Nile water resources in the Sudan. Furthermore, Egypt insisted that the treaty be considered as a temporary agreement, with a permanent agreement to be reached once the question of the future of the Sudan has

been resolved.⁶² The British East African territories were bound by the treaty.

Tanganyika, Kenya, and Uganda could not develop their Nile resources without the prior agreement of Egypt.

Save with the previous agreement of the Egyptian Government, no irrigation or power works are to be constructed or taken on the River Nile or its branches, or on the lakes from which it flows so far as these are in the Sudan or in the countries under British administration, which would, in such a manner as to entail any prejudice to the interests of Egypt, either reduce the quantity of water arriving in Egypt, or modify the date of its arrival or lower its level.⁶³

The agreement, like the 1925 letter from Lord Lloyd, ratified Egyptian paramountcy in the British dominated upstream Nile countries. Uganda could not, without Egyptian permission, build the Owen Falls dam. With the 1952 collapse of British power in Egypt and the subsequent independence of Sudan and the East African states, the agreement was moot sometime between the completion of the Owen Falls dam and the 1959 treaty. The treaty remains the most widespread regime created in the Nile basin. Unlike the 1959 treaty, it included all the Nile countries aside from Ethiopia and the Belgian Congo (Kinshasa).

THE 1959 NILE WATERS AGREEMENT

The rise of Nasser in Egypt brought about some rhetorical changes in Egyptian policy. The independence of the Sudan in 1956 presented Egypt with a remarkable opportunity. Unlike Britain, Egypt's partner in the Anglo-Egyptian Co-dominium of the

⁶²Odidi Okidi, "History of The Nile and Lake Victoria Basins Through Treaties," in P. Howell and J. Allan, eds., *The Nile*, (London: School of Oriental and African Studies, 1994), pp. 326-327; Howell, "East Africa's Water Requirements," p. 85.

⁶³Clause 4 (ii) of the 1929 Nile Waters Agreement, as cited by Paul Howell, "East Africa's Water Requirements," p. 85.

Sudan, Nasser's Egypt was located immediately to the north of the newly independent country. For the Egyptians, Sudanese independence may have presented an opportunity to rid themselves of the British checks that had hitherto encumbered Egyptian activities in the basin. As stated earlier, the Sudan sought the professional services of a British hydrological firm. Armed with a neo-Hurstian study, the Sudanese government went into negotiations with Egypt with an integrationalist perspective. Egypt not only rejected the Sudanese position, it destabilized the Sudanese government, invited a coup, and finally forced the 1959 agreement on the Sudan. Any examination of the events of 1958-1959 would lead one to believe that the 1959 agreement was a product of Egyptian hegemony. Nevertheless, Thomas Naff, an expert on water-related conflict, argues that "only when Egypt, the Nile's premier power, agreed, was the 1959 treaty with the Sudan signed."⁶⁴ Naff tries to argue that river-basin regimes require hegemons like Egypt. But his arguments make several flawed assumptions. First, the Sudan's preferences, in the absence of Egyptian-induced duress and when hydrological interests were held paramount, were clearly against the 1959 water agreement and its associated Aswan High Dam. Second, the regime is not Nile-wide; it is simply an agreement between Egypt and the Sudan and it excludes all other countries in the basin. Third, Naff implies that the 1959 agreement was a net-positive to the Sudan. Given the economic, social, and environmental problems associated with the Jonglei canal and other Egyptian-related projects in the Sudan, it is very doubtful that the 1959 treaty was a net benefit to the Sudan.

⁶⁴Naff, "Conflicts and Water Use in the Middle East," p. 277.

There were ten important points in the agreement. First, unlike the 1929 agreement, the one of 1959 was designed for the "full utilization of Nile waters." Second, the agreement did not abolish or repeal the 1929 agreement as far as Egypt and the Sudan were concerned. Third, the agreement calculated Egypt's established rights on the basis of the 1929 water allocation. Fourth, Sudan consented to the building of the Aswan High Dam and Egypt agreed to permit the construction of the Roseries dam on the Blue Nile. Fifth, the "additional" water resources created by the Aswan High dam (22 cubic kilometers) were divided between Egypt and the Sudan after the previously allocated shares and evaporation (estimated at 10 cubic kilometers) were taken into account; Egypt received 7.5 cubic kilometers and the Sudan's share was increased by 14.5 cubic kilometers to 55.5 and 18.5 cubic kilometers respectively. Sixth, the Sudan was to advance a water loan of 1.5 cubic kilometers a year until 1977. According Raj Krishna, an expert on treaties, the water loan may have lasted well beyond November 1977. Seventh, Egypt paid \$15 million dollars to the Sudan as compensation for the displacement of Sudanese citizens displaced by the Aswan High dam. Eighth, the Sudan agreed to undertake projects in the Upper Nile region to increase water supply jointly with Egypt; these projects included the Jonglei canal. Ninth, the Permanent Joint Technical Commission (PJTC) composed of an equal number of Egyptians and Sudanese hydrologists was established under the agreement. Tenth, the two states agreed to adopt common policies with regard to the claims of other riparian states. If Egypt and the

Sudan accepted a claim by another riparian, they were to share equally in creating the third country's share of the water.⁶⁵

Rather than being an opening for negotiations with other countries, this tenth point virtually insures that the Sudan, rather than Egypt, will bear the lion's share of any allocations to a third country. Suppose that Egypt and the Sudan accept an Ethiopian claim of 6 cubic kilometers of water. Egypt would be forced to forgo 3 cubic kilometers of water out of 55.5--an amount that it could save elsewhere through improving irrigation and perhaps even operating the Aswan High Dam at a lower level. Sudan would be forced to forgo 3 cubic kilometers out of an annual quota of 18.5 cubic kilometers. Worse still, this aspect of the agreement allows Egypt to blame the Sudan for any rejections of water claims by other co-riparians, because the Sudan, under this agreement, is forced into a position that renders serious consideration for the needs of other basin states moot. Not only does the tenth point benefit Egypt, it allows the country the option of pretending that it supports allocations for third parties while being able to count on the Sudan to reject the claims of Ethiopia and the Great Lakes states. Egypt keeps the water, and the Sudan pays the diplomatic price. Thus, it would be hard to conclude that the 1959 agreement benefits the Sudan in any way. Rather than reaching an agreement with Egypt, the Sudan's interests would have probably been served by helping itself to the water or reaching some accommodation with Ethiopia. By 1958, Nasser's Egypt was busy creating enemies for itself, and the Sudan could have sought alliance with the West or with Israel to check Egypt's military superiority. The strange Sudanese-Egyptian

⁶⁵Raj Krishna, "The Legal Regime of the Nile River Basin," in Joyce R. Starr and Daniel C. Stoll, eds., *The Politics of Scarcity: Water in the Middle East*, (Boulder, Colo.: Westview Press, 1988), pp. 28-30.

structure, which manifests itself in the 1959 treaty, led some of the other basin states to pursue cooperation with each other.

GREAT LAKES STATES' REGIMES

Thus far, three regimes have appeared in the Nile basin area of the Great Lakes. The earliest regime was a 1965 agreement that brought together Egypt, Sudan, and the three former British East African states. In 1961, Uganda, Kenya, and Tanganyika wanted to conduct a survey of Lake Victoria, Lake Kyoga, and Lake Albert. They appealed to the UN Expanded Program of Technical Assistance. By 1965, the five states signed an agreement for conducting the survey with the United Nations Development Program. The survey was conducted by the World Meteorological Organization. Later, the agreement was extended to Rwanda and Burundi.⁶⁶ Of course, this regime was for the purposes of generating information only. It contained no mechanism for dispute resolution or allocation.

The Lake Basin Development Authority was formed by the three former British East African States in 1982, and while it is mentioned in Paul Howell's 1994 article, it remains a rather obscure body. Books about development of agriculture in Kenya and Tanzania do not even mention the Authority. Furthermore, Powell makes an appeal to the outside world to finance the LBDA and develop it as a competitor to the PJTC.⁶⁷ Okidi refers to the Authority as an economic development agency used by Kenya primarily to coordinate the development of its Lake Victoria region with Ugandan and

⁶⁶Ibid., p. 31.

⁶⁷Howell, "East Africa's Water Requirements," p. 103.

Tanzanian planning efforts.⁶⁸ Uganda and Tanzania also cooperate within the context of the Kagera Basin Organization (the KBO). The KBO was established in 1977. It currently has four members: Uganda, Tanzania, Burundi, and Rwanda. While the KBO is a strong organization with extensive legal powers,⁶⁹ it lacks the funds and has not managed to accomplish its goals.

TECCONILE

Tecconile is the latest regime to emerge in the Nile valley. It includes all the Nile states except Ethiopia. The organization was established during the Nile 2002 conference that was held in Khartoum in February 1994. The stated purpose of the organization is to "deal with the technical aspects of Nile water cooperation among Nile-basin states."⁷⁰ Tecconile has been set up to study the technical aspects of integration. Ethiopia has refused to join the organization, and it seems to be little more than a confidence raising measure. "As one observer at the Khartoum conference remarked: 'Tecconile might give Nile countries a bit of confidence in dealing with each other, but it will not be the father of a water allocation and management system.' That can only come if Ethiopia is brought into firm negotiations with Egypt."⁷¹

⁶⁸Okidi, "History of the Nile," p. 343.

⁶⁹Krishna, "The Legal Regime," p. 31.

⁷⁰Brian Scudder and Jon Wild, "Water: Whose Nile Is It Anyway?," *The Middle East*, No. 233 (April 1994), p. 34.

⁷¹*Ibid.*

ANALYSIS OF NILE REGIMES

An editorial in the *Al-Ahram*, Egypt's virtually official newspaper, strongly suggests that Egypt is opposed to any changes in current *status quo*. Dr. Rushdie Sa'id, an editorialist for the newspaper, attacked the 22 August 1997 Wall Street Journal editorial which called for a Nile-wide water allocation regime. Sa'id proceeded with statements arguing that no other country has any rights to Nile water. Britain, Ethiopia, the United States, and Israel are blamed for allegedly attempting to de-Egyptianize the Nile:

Until the beginning of the twentieth century, the River Nile was a pure Egyptian river. It had been studied, and plans for its use were placed in the Public Works Ministry, which employed some of the best hydrologists in the world at the time. In the twenties of this century, the English introduced cotton to the Sudan which necessitated taking an appropriate amount of water, in a manner suitable to Egypt. The amount of water was limited within the context of the "give-and-take" that lasted between 1929 and 1959 -- when the issue was settled with the water distribution treaty that followed the construction of the Aswan High Dam. Ethiopia refused to recognize this treaty despite the fact that it used no Nile waters at the time . . . In the sixties, the United States found it useful to use the Nile as an issue to force Egypt away from the independent discourse it was following at the time. It sent a large delegation of its experts to study the sources of the Nile in Ethiopia in order to suggest projects for utilizing the water sources, but Ethiopia did not need water resources at that time . . . It further increases suspicions is that the experts advising the IMF on Nile study projects worth up to one hundred million dollars are specialists in conflict management and resolution--a discipline invented by the Jews to manage Israel's conflicts with its neighbors. Now, they seek to bring conflict to the Nile basin.⁷²

These arguments strongly suggest that Egypt views the Nile as its property and the water allotment to the Sudan as a necessary concession of *Egyptian* water rather than an obligation under an international regime. Furthermore, Sa'id's statements clearly

⁷²Rushdie Sa'id, "What is Behind Opening the Nile Water Distribution File? *Al-Ahram* (3 September 1997), p. 12. In Arabic.

indicate that Egypt is not willing to accept the Nile as an international river and that Mamdouh Shahin's suggestion with regard to providing two cubic kilometers of emergency water for Ethiopia during drought years is a questionable offer.⁷³ The offer is designed to foil outside criticism for Egypt's monopolization of Nile waters while Ethiopia starves due to drought. Sa'id obviously assumes an Egyptian audience, so he speaks freely in his newspaper article. Near the end, he attempts to sugar-coat his arguments by stating that the Nile "should be a bridge for peace," but "peace" here seems to mean the proverbial "peace of Saladin"--peace built on a foundation of utter dominance by one side and total capitulation by all others. Sa'id's language, and to a lesser extent Shahin's, embody some core Egyptian attitudes towards other co-riparians. In a 1995 speech, the Egyptian minister for Public Works invited the other Nile states to cooperate with Egypt in the development of the Nile. He placed heavy emphasis on not "harming any country" through water projects. He also stated that "the Nile is Egypt's life, representing its past civilization, its present base, and its future fortune." Furthermore, he emphasized the role of "international law and justice." The Egyptian interpretation of international law, of course, does not recognize the right of other countries to Nile water. The emphasis on "harm" is simply a pre-set pseudo-criteria that no upstream country can meet on the ground that any water project would harm Egypt. In essence, Sa'id's editorial is a blunt, undiplomatic restatement of the Public Works Minister's declarations two years earlier.⁷⁴ Talking about cooperation, while doing

⁷³Mamdouh Shahin, "Discussion and Response," p. 19.

⁷⁴Mohammed Abdel Hady Rady, "Satisfying National and International Water Demands," *Water International*, Vol. 20 (1995), pp. 9-10.

everything possible to prevent it, has been Egypt's formula to prevent the development of water resources upstream for decades. John Bulloch and Adel Darwish outline Egypt's approach:

Egypt is the Oliver Twist of the Nile: it always wants more. Thus, its policy is not only to maintain its current supplies, but also to prevent, if possible, other countries from increasing their take, and to induce those upstream states to go in for projects that will benefit Egypt as well as themselves--the Jonglei Canal in Southern Sudan is the prime example of this. One senior Egyptian planner told us: "Although Egyptian officials always talk of cooperation, and appear to favor cooperation among the nine states on the use of the Nile water, they always add a footnote in the way of 'yes, but as soon as civil wars, political troubles and other conflicts end' or 'when African countries are politically stable ... etc.' It would be naive to think that the Egyptians don't have plans to exploit the politically unstable situation in some African countries--those which have unfriendly governments or are considering plans that would affect the flow of the Nile. Egypt always wants these plans postponed--indefinitely." Another diplomatic method used by Egypt is shown by its representatives in International gatherings. Their opening argument is always that many riparian countries can rely on rainwater for irrigation, while Egypt is totally dependent on the Nile and the Sudan relies on the river for half its needs."⁷⁵

The great irony is, of course, that Egypt's water supplies could be greatly increased through cooperation with other co-riparians. Egypt can get more water by weaving a Pan-Nile regime that binds all the states in the basin to its water supply system by supporting the implementation of a modernized form of Hurst's "Century Storage" plan and the U.S. Bureau of reclamations project in Ethiopia. None of these projects can realistically be built without Egyptian participation, Egyptian input, and a strong Egyptian voice in their management. From a hydrological (or water maximizing) perspective, current Egyptian policy is not rational. Egypt's need to control the Nile is not, in the final analysis, a function of its water needs. In its national water policy, Egypt

⁷⁵Bulloch and Darwish, *Water Wars*, pp. 94-95.

seems to highlight the word "national" rather than "water." Put another way, Egypt's realism in the Nile basin is not a hydrological realism. These attitudes have shaped and been shaped by the conflicts that have plagued the Nile basin since the rise of Mohammed Ali in Egypt and is discussed in the following sections.

None of the regimes in the Nile basin provide for conflict resolution mechanisms. The 1959 Nile Waters Agreement and the Kagera Basin Organization represent agreements on pre-set quantities or goals. Under Oran Young's classification of regimes,⁷⁶ the 1929 Nile Waters Agreement represents an imposed regime, because Britain represented both the Sudan and its East African territories. "Imposed" could also be used to describe the 1959 Nile Waters Agreement, because Egypt forced a change in the Sudanese polity in order to accomplish its goals. Tecconile and the Hydromet survey of the Great lakes represent negotiated regimes; these two regimes were designed to gather information or build confidence, and they do not involve dispute resolution or water allocation. Unlike the 1959 Nile Waters Agreement, the Kagera Basin Agreement seems to be the product of consensus and negotiations, but its organizational offspring lacks the funds to become effective. Of course, none of these regimes include Ethiopia. Ethiopia does not share in the Kagera Basin, so it would be unrealistic to consider its inclusion there. But it is the primary contributor of water to Egypt and the Sudan, so it would be logical to expect its inclusion in Nile Water regimes established by these two countries. Since Ethiopia and the Sudan share dependence on erratic rain and the dry clay plains of the Blue Nile region, a self-generating agreement or regime is reasonable to

⁷⁶Oran Young, *International Cooperation: Building Regimes for Natural Resources and the Environment* (Ithaca, N.Y.: Cornell University Press 1989), pp. 84-89. Young classifies regimes into three categories: self-generating, imposed, negotiated.

predict, but such a regime has failed to emerge. In addition, the 1959 agreement represents a greater imposition on the Sudan (and its non-party, Ethiopia) than the 1929 agreement.

While Egypt and the Sudan do not share hydrological interests, Egypt shares a common language and faith with the ruling elites in the Sudan. The Sudan and Ethiopia share common hydrological and agricultural interests, but the ruling elites in the two states have different languages and religions. Ethiopia's ruling elites have been Amhara and Tigray. These elites have traditionally had either a Coptic, secular, or atheist religious orientations. There are, of course, large numbers of Ethiopian Muslims, but Islam never enjoyed the official dominant role it plays in the Sudan or Egypt. Ethiopian Emperors have been Coptic in faith, and post-monarchical Ethiopia has never had a Muslim for its head of state. This makes Ethiopia unique in the Nile basin, and without partners in the region aside from Eritrea. To complicate matters, about 10-15 percent of Egypt's population is Coptic; and despite Boutros-Ghali's protests to the contrary, it well known that the Egyptian Copts face a great deal of social discrimination and pressure. In addition to Muslims, the Sudan has also large numbers of Catholics, Protestants, traditional religionists, and both Egyptian and Ethiopic Copts. From this complicated confessional picture, something akin to Huntington's clash of civilizations may emerge to partially explain the lack of a regime that includes Ethiopia.

The Kagera Basin Organization includes a number of countries that share some similar characteristics. Unlike Ethiopia and Egypt, these countries are products of Western colonial powers. Tanzania was ruled by Germany and then the United Kingdom. The British also ruled Uganda and Kenya. Belgium governed the Congo,

Rwanda, and Burundi. Groups such as the Hutu and the Tutsi, as well as related Bantu-speaking groups, exist in all these states. Western forms of Christianity dominate the confessional landscape in these states, and only Tanzania has a substantial Muslim minority. Unlike Egypt, Ethiopia, and the Sudan, these states have generally separated religion from politics. A Muslim, Idi Amin, ruled Uganda, and Muslims have played a role in the government of Tanzania. Cooperation seems to be taking place within a sphere of shared cultural, ideological, and civilizational parameters. Egypt is willing to pay water rents to the Sudan, on its terms of course, but not to Ethiopia or the Great Lakes states. Does the opposite apply to conflict? Does conflict occur between members of the three categories of state (Arab-Islamic, African-Secular, Ethiopic) described here?

POLITICAL CONFLICTS AND WAR

Egypt is the only country that has stated openly that it would fight for Nile waters. Presidents Sadat and Mubarak have openly said that Egypt will fight if its water supplies are threatened. For Sadat, the Nile may have simply been another word for Egypt. Sadat, whose mother was Sudanese, regarded Egypt as distinct from the Arab world. In a 1978 conversation with Mousa Sabri, a leading Egyptian journalist, Sadat said, "We survived as a great nation for almost 5,000 years without the Arabs ... But look there, Mousa, [pointing South] ... we cannot survive without Africa."⁷⁷ Yet Sadat's African orientation took a very unusual form. While clearly proud of his African heritage, Sadat was quite willing to wage war against Ethiopia for the right to control the Nile:

⁷⁷Anwar Sadat, President of Egypt, as cited by Bulloch and Darwish in *Water Wars*, p. 84.

We do not need permission from Ethiopia or the Soviet Union to divert our Nile water ... If Ethiopia takes any action to block our right to the Nile Waters, there will be no alternative for us but to use force. Tampering with the rights of a nation to water is tampering with its life and a decision to go to war on this score is indisputable in the international community."⁷⁸

Sadat made these statements in 1980; he was reacting to Ethiopian protests of Egypt's plans to divert Nile waters to the Sinai peninsula and to Israel's Negev desert. Under the current *status quo*, Egypt pursues a policy of preventing the development of Nile resources in Ethiopia. It would be very difficult for Ethiopia to stand aside as Egypt sells water outside the basin. Thus, any water sales outside the basin need to take place under a secure clear water-allocation regime that includes all Nile states in order to avoid friction and conflict. In 1979, Egypt threatened war against Uganda, because Idi Amin had threatened to destroy the Owen Falls Dam and to poison the waters flowing into Egypt and the Sudan. Mubarak threatened war against the Sudan during the 1990-1991 Persian Gulf War, because the Sudan had sided with Iraq during that war and threatened to destroy the Aswan High Dam. The Sudanese and Ugandan governments had threatened to use force first, so the Egyptian response was clearly understandable. The 1980 diplomatic confrontation with Ethiopia ended peacefully, with no Egyptian water transfers to Israel.

In contrast, the cries for war in the Egyptian parliament during the late 1980s-early 1990s cannot be understood on rational grounds. The drought had lowered the water levels in Lake Nasser, and the parliament asked Dr. Hamid al-Taheri, a renowned Egyptian hydrologist, to prepare a report. Al-Taheri presented his report in 1992. Instead

⁷⁸Anwar Sadat, President of Egypt, as cited by Raj Krishna, "The Legal Regime," p. 33-34.

of addressing the causes of the drought or ways that would allow Egypt to use water more efficiently, al-Taheri singled out Ethiopia and Uganda for blame. Instead of conducting a study within his profession, al-Taheri politicized his work in a manner that is perhaps unique to Egyptian hydrology. The biggest threats Egypt faces, he said, were Ethiopian and Ugandan water development programs. He also blamed Israel for Egypt's difficulties with Ethiopia and for the Sudanese civil war. The Egyptian parliament responded with "shouts of 'When are we going to invade the Sudan?' and 'Why doesn't the air force bomb the Ethiopian dams?'"⁷⁹ Egypt's saber-rattling, and "Oliver Twist" policy, with regard to Nile waters, does not make hydrological sense. They inhibit upstream cooperation and subsequently reduce the water available to Egypt. The history of conflict in the basin provides ample clues.

EGYPT INVADES THE SUDAN: 1825

Egypt's past forays into the Sudan were successes. Egypt invaded the Sudan in the early 1800s in order to simply seize territory and populations. Between 1820 and 1825, Muhammad Ali expanded his Egyptian domains southward deeper into the Sudan. He was, to some extent, replicating the Ottoman conquest of Lower Nubia and the Red Sea Coast three centuries earlier. His motives were clear. Muhammad Ali wanted to eliminate a remnant of the Mamluks that had taken shelter in what is today called Northern Sudan, and he also wanted to increase his territorial holdings, provide for additional sources of taxation, and increase the supply of slave-soldiers—the *Jihadiya*. There were, at the time, four Islamic Northern Sudanese polities capable of offering some resistance: Darfur, the Funj Sultanate of Sennar, Metemma (the Ja'ali tribal

⁷⁹Bulloch and Darwish, *Water Wars*, pp. 88-90.

confederation), and the Shayqiyya tribal confederation. Sennar was the most powerful polity in Northern Sudan, and had its internal affairs been in order, it is highly doubtful that Muhammad Ali's expedition would have been successful. The Funj Sultanate of Sennar did not offer resistance, because it was in a period of political turmoil with temporary power being held by a junior minister. The Funj monarch was only a nominal ruler who quickly made his submission to Muhammad Ali's forces. Muhammad Ali's army defeated the rulers of Metemma and the Shayqiyya and co-opted the two tribes into his new regime. As a more centralized and organized order, Darfur proved more difficult to defeat. Nevertheless, Muhammad Ali's forces were able to wrest Kurdufan from the Sultanate of Darfur. Expansion into Darfur proper and the Southern Sudan came at a later date.⁸⁰ Darfur and Southern Sudan and even Northern Uganda were later added by *Khedive* (Regent) Ismail by 1881 -- the year of the Mahdist revolt in the Sudan.

EGYPT INVADES ETHIOPIA: 1875

The first major conflict in the modern history of the Nile reveals a great deal about the subsequent problems that would haunt the basin. Egypt's motives with regard to the conflict were clear: empire and revenue. Control over Nile waters was not a motivating factor in the Egyptian invasion. Even assuming a much smaller knowledge base on the Nile at the time, the Egyptians clearly knew that some of "their" water came from Ethiopia, but this was not the motivating factor behind the war. Ismail's comments about Yohannes IV were revealing. First, Ismail never questioned his own right, as a Muslim, to appoint religious officials for a faith other than his own. Second, he constantly disparaged the legitimacy of Yohannes IV, another sovereign, comparing him

⁸⁰Holt and Daly, *A History of the Sudan*, pp. 47-80.

to a mere Egyptian bishop. Nowhere in the discourse surrounding the war did the word "water" appear. The war was about expanding Ismail's domains and revenue. Finally, the war shows clearly that Egypt, even with an immense advantage in military technology, some Ethiopian allies, and control over the Red Sea coast, did (and perhaps does not and will not) not have the reach to control Ethiopia. Ismail Pasha had inherited the Egyptian realm in 1863. He sought to revive his grandfather's imperial program and to expand Egyptian territory further still. He had rules of succession to the Egyptian throne changed in favor to his first born son, and he acquired the title of Khedive, or viceroy. The new rules of succession and the new title marked Ismail's interests in independence and empire. Like his grandfather, he constructed many projects and built a modern army and a navy. In so doing, he increased Egypt's foreign debt from 3 million sterling pounds to 100 million sterling pounds, after 15 years on the throne. Thus, he needed to generate new revenues quickly and needed to expand his tax base. Ismail had already acquired territories in what is today known as Eritrea and Ethiopia, but the core of Ethiopia remained outside his reach. The Egyptian-ruled territories along the Red sea (the Red Sea coast from Swakin to Massawa) and in Ethiopia were at the time *Ottoman* territories, and Ismail wanted territories with no Ottoman strings attached. Beset by financial problems and a desire for an empire with minimal Ottoman influence, Ismail decided to transform his military assets to economic ones through the conquest of Ethiopia.⁸¹ Egypt began its expansion program in Ethiopia by attempting to capitalize on the decentralized nature of the Ethiopian Empire. Emperor Yohannes IV, whose main

⁸¹Zewde Gabre-Sellassie, *Yohannes IV of Ethiopia: A Political Biography* (Oxford: Clarendon Press, 1975), pp. 54-55.

power base was in Tigray, was the overlord of dozens of kings, chieftains, shiekhs, and other potentates, and some of these vassals were willing to betray their emperor. In a 17 September 1875 letter to Arakel Bey Nubar, the Ottoman-Armenian Governor of Massawa, Ismail outlined his new policy of aggression against Yohannes. An Egyptian force of 2,500 soldiers, commanded by the Danish officer Søren Arendrup, was sent into Ethiopian territory. The force was destroyed by Ethiopian forces loyal to Yohannes on the night of 15-16 November 1875. A second Egyptian force sailed from Suez to Massawa on 15 December 1875. This second force had 12,000 soldiers. Yohannes fielded an army of perhaps 50,000-100,000, including 6,000 soldiers armed with firearms, 3,000 cavalry, and 18 cannons against the invading Egyptians. In a bloody battle on 7-10 March 1876 near Kaykhor, Ethiopia, Yohannes and his allies defeated the Egyptians. Still, Ismail did not abandon his designs on Ethiopia, and the conflict did not end until Yohannes defeated Wolde Mikael, the Ethiopian governor of Hamasen, who had taken side with the Egyptians. Ismail did conclude a peace treaty with Yohannes.⁸²

THE MAHDIST WARS: 1883-1899

Egypt's failure in Ethiopia was followed by defeats in the Sudan. These defeats continued until the British intervened directly in Egypt and the Sudan. The Mahdists went to war with Ethiopia and Egypt for the purpose of spreading their variety of Islam. They did not confront and fight the British, the Egyptians, the Ethiopians, and the Italians for the sake of securing Nile water. There were five major Mahdist wars. First, the Mahdists waged war against the Egyptian government in the Sudan and expelled it. Second, they invaded Ethiopia with mixed results. Third, they waged war against

⁸²Holt and Daly, *A History of the Sudan*, pp. 30-31, 54-83.

Darfur's royal household and replaced it with their own governor. Fourth, they waged war against Egypt and failed. And finally, they resisted the successful Anglo-Egyptian invasion of the Sudan between 1896-1899. The Mahdist movement was a messianic religious movement. Many persons and groups joined the Mahdi for political, economic, and even xenophobic reasons, but at its core, the movement was composed of true believers. The Mahdist movement took its name from the title claimed by its founder and first leader, Muhammad Ahmad ibn Abdullah, a riparian Sudanese Arab from the Dongola. *Mahdi* means "rightly guided one." The title was seldom used without the "*al*" prefix, implying that Muhammad Ahmad was *the* Mahdi. He was a local cleric, lacking the formal education in Islamic studies. His religious education took place literally at the feet of Sudanese mystics and religious teachers. Before his entrance into the world of war and Anglo-Egyptian imperial politics, he was a member of a sufi mystic order called the *Sammaniyya*. After leaving the order, Muhammad Ahmad set up a religious practice on the White Nile island of Aba. He began sending letters to Sudanese grandees claiming to be the expected Mahdi -- a messiah who will lead the re-founding and purification of Islam. Soon, he began attracting followers, and his claims grew. He began to claim to be the *Imam*, the apostle of God, and the re-creator of the life of the prophet Muhammad. He attracted former slave merchants who saw their industry destroyed by Ismail and his Governor-General of the Sudan, Charles Gordon. He also attracted people who resented the fact that Christians held powerful offices in the Egyptian administration of the Sudan. Among his leading supporters were the *Baqqara* (cattle raising) Arabs of the marchlands between Northern and Southern Sudan who were interested in "killing the Turks and not paying taxes." He managed to recruit *Beja* tribesmen (pejoratively called "fuzzy-wuzzies")

by the British) from the Red Sea hills. His revolt began at Aba island and moved into Southern Kurdufan. The Mahdi welcomed captured *Jihadiyya* into his armies. Unlike other Mahdist troops, the *Jihadiyya*, now mainly in Mahdist service, were equipped with firearms.⁸³

Soon, the Mahdi was coming to the attention of the British. After destroying the nationalist government of Ahmad Urabi *Pasha* in Egypt in 1882, Britain was now ascendant in Egypt. In 1883, Britain allowed Egypt to re-establish an army in order to defeat the Mahdi. The Egyptian government hired General William Hicks, a former officer in the Indian army, to lead its expedition against the Mahdi. Hicks was defeated and killed by Mahdist forces outside Obeid, the capital of Kurdufan on 27 September 1883. After the destruction of Hicks' army, Charles Gordon was again appointed Governor-General of the Sudan. He arrived in his former capital on 14 February 1884, and began attempting to organize evacuation and resistance. Gordon was incapable to stopping the Mahdist flood, and on 25 January 1885, Mahdist troops entered Khartoum and Gordon was killed during the battle.⁸⁴ The Sudan, except Equatoria, under the rule of the German-Muslim Amin *Pasha*, and Suakin on the Red Sea coast, was now under Mahdist rule.⁸⁵ The Mahdi did not live long to enjoy his victory. He was succeeded by his first lieutenant, a *Baqqara* Arab from Kurdufan called Abdulahi "*al-Tor al-Shayn*"

⁸³Ibid., pp. 86-90.

⁸⁴Ibid., pp. 92-93.

⁸⁵Ibid., pp. 94-95.

(the ugly bull) Al-Ta'ishi who was given the title of *Khalifat al-Mahdi* -- the successor of the Mahdi.

In 1887, the Mahdists moved quickly to regain control Darfur.⁸⁶ From a contemporary perspective, the war in Darfur can be explained as the Mahdists' consolidation of their position in Western Sudan, although it was a "foreign" war to some extent. In contrast, the war against Ethiopia clearly constituted trans-boundary Mahdist aggression. In Ethiopia, Yohannes IV was resisting Italian pressure and incursions at the time of the Mahdist invasion of 1888. Twice that year, Mahdist Emir Hamdan Abu Anja crossed the border with an army and advanced as far as Gojjam in central northern Ethiopia. Yohannes IV retaliated by invading the Mahdist state in March 1889. On 9 March 1889, a fierce battle broke out between the Ethiopian and Mahdist armies at Gallabat, Sudan. The Ethiopians were initially very successful, but a stray bullet wounded and later killed Yohannes. The Ethiopian army withdrew, and some Mahdists took pursuit, killing many of Ethiopia's nobles. The head and crown of Yohannes were taken by the Mahdists to their capital, Omdurman; while the Mahdists could claim victory, the war was extremely expensive in terms of casualties on both sides.⁸⁷

As unwise as the war with Ethiopia may have been for the Mahdists, the campaign against Egypt was suicidal. By July 1889, a Mahdist army had moved 60 miles into Egypt but on 3 August 1889, the Anglo-Egyptian army defeated the Mahdists near

⁸⁶Ibid., p. 102.

⁸⁷Gabre-Sellassie, *Yohannes IV*, pp. 238-249.

the Egyptian village of Tushki. The Mahdist commander, Emir Abd ar-Rahman Al-Nujumi, was killed and the Mahdists lost both an army and a successful commander. This defeat did not stop the Mahdists. In 1891, they attempted to capture Anglo-Egyptian Suakin, but the British and the Egyptians routed them. In 1893, they attempted to invade Eritrea which had fallen to the Italians after the death of Yohannes IV, but the Italians defeated them at Agordat. The following year, the Mahdists attempted to expand their domains deeper into Bahr al-Ghazal and Equatoria, but failed.⁸⁸

The final Mahdist war was a product of the Anglo-Egyptian invasion of the Sudan in 1898-1899. The Anglo-Egyptian forces advanced up the Nile during these two years. General Herbert Kitchener defeated the Mahdists in a series of battles including the well-known battle of Omdurman. Aside from the initial Mahdist war, which can be thought of as a sort of war of independence, this was the only war that the Mahdists did not start. For the British, ridding their newly-reacquired possession, the Sudan, from the French took precedence over dealing with the remaining Mahdists. Consequently, the Anglo-Egyptian army scrambled up the Nile to confront the French at Fashoda. A dozen French officers and about 100 Senegalese soldiers, led by Captain Jean-Baptiste Marchand, arrived on the Nile from Brazzaville in the French Congo in July 1898 with plans of containing the British and the Egyptians. Confronted by Britain and Egypt, France abandoned its claim on the Upper Nile. On 11 December 1898, Marchand's troops lowered their tricolor, and evacuated the Upper Nile. France was in turmoil over the

⁸⁸Holt and Daly, *A History of the Sudan*, pp. 104-105, 109-110.

Dreyfus affairs, and could not confront Britain at the time.⁸⁹ For the British and the French, the Fashoda incident became another colorful colonial confrontation. For the Egyptians, however, fear of a strong power occupying the Upper Nile became a national complex.

The motives of the British and the French were clear. The European colonial scramble for possessions in Africa was at its zenith during the 1890s. The Egyptians had come to the Sudan to build themselves an empire too, but they had an interest in a pacified country South of their border to prevent its use as a base against the Khedival regime in Cairo. The Mahdists were primarily motivated by religion, believing that they were the only true Muslims. Their attacks always followed spurned invitations to join their movement. In January 1888, Abdullahi had written to Yohannes IV explaining that Anu Anja was sent to Ethiopia, because Yohannes had refused to embrace Islam and submit to the Mahdists.⁹⁰ Abdullahi had also sent letters to the the Khedive of Egypt, the Ottoman Sultan Abdul-Hamid II, and Queen Victoria inviting them to convert to the Mahdist variety of Islam and to submit to the Mahdist state. He had warned Queen Victoria about the dire consequences of refusal:

Thy soldiers thought only of retreat from the Sudan with discomfiture and defeat, whereof they had more than enough . . . Thus hast thou erred in many ways, and art suffering great loss, wherefrom there is no refuge for thee save by turning to God the King, and entering among the people of Islam and the followers of the Mahdi, grace be upon him. If thou wilt do thus ... then shalt thou achieve thy desire of perfect felicity and true repose ... the like of which eye has not seen, nor ear heard, or heart of man conceived. But if thou wilt not turn from thy blindness and self-will ...

⁸⁹Alan Moorehead, *The White Nile* (London: Penguin, 1971), pp. 330-345.

⁹⁰Gabre-Sellassie, *Yohannes IV*, pp. 243, 245.

thou shalt be crushed by the power of God and his might, or be afflicted by the death of many of thy people, who have entered on war with the people of God, by reason of thy Satanic presumption.⁹¹

While the letter suggests that the Mahdists were not aware of the considerable power of the British Empire at the time, they were not the religion-crazed dervishes that linger in cinema. It is clear that the Mahdist state managed to preserve law and order at least in Northern Sudan. Its greatest failure, aside from its wars against its neighbors, was its revival of slavery and slave-raiding in Southern Sudan. While they kept some members of the European micro-communities as hostages and prisoners, they left most remaining Europeans alone as long as they at least pretended to embrace Islam.⁹²

THE SUDANESE-EGYPTIAN CONFRONTATION OF 1958

Superficially, this confrontation would initially appear to be the product of a dispute over Nile waters, but closer examination reveals otherwise. The 1958 confrontation between Egypt and the Sudan had its roots in THE Sudan's independence process. Unlike most other third world countries, Sudan had two colonial masters rather than one. As a direct consequence of the Mahdist wars, Britain and Egypt ruled the Sudan jointly, and the Egyptians wanted to link the Sudan to Egypt once the British departed. In the mid-fifties, Northern Sudanese politics was centered around the relationship of the Sudan with Egypt. The National Unionist Party (NUP) favored close relations with Egypt. The Umma (Nation) Party (UP) composed of the followers of the Mahdi's family, favored total Sudanese independence from both Egypt and Britain.

⁹¹Abdulahi Al-Ta'ishi, *Khalifa of the Mahdist Sudan* as cited by Moorehead, *The White Nile*, p. 283.

⁹²Moorehead, *The White Nile*, p. 278.

During 1953-1954, Nasser began an offensive based on charm in the Sudan. He instructed his minister for Sudanese Affairs, Salah Salem, to spend large sums of money in the Sudan to induce the Sudanese to support some form of integration with Egypt after independence. The Umma Party reacted to Salem's program by mounting protests and attacking Egypt in its newspapers, revealing evidence of Egypt's support for the NUP. Despite the Umma Party's protests, the NUP went on to win the last pre-independence election in the Sudan, and its leader Ismail al-Azhari became Prime Minister. Once in office, the NUP changed its tune with regard to Egypt; despite voting for the NUP, most Sudanese people favored independence. Consequently, the NUP no longer sought union with Nasser's Egypt. Azhari's new policy was supported by the Umma Party and the British as well as his own party. By April 1955, the Sudanese government was negotiating with Egypt over the revision of the 1929 agreement, and its representatives were constantly rejecting Nasser's Aswan High Dam proposal in favor of an all-Nile water-resource development program.⁹³

While the Sudanese government was conducting negotiations with Egypt, the garrison of the Sudanese army in Torit in Southern Sudan revolted. The revolt was partially a direct result of Britain's "Sudanization" policy which placed Northern Sudanese officers in command of Southern Sudanese troops. The Northern Sudanese officers tended to view their Southern Sudanese troops as racially-inferior infidels. Egyptian propaganda in Southern Sudan had capitalized on these attitudes in order to win Southern Sudanese support for closer ties to Egypt. Egypt was already toying with the idea of supporting the rebels to pressure the Sudanese government to yield on the Nile

⁹³Anthony Nutting, *Nasser* (New York: E.P. Dutton, 1972), pp. 110-113.

question. Azhari and the British Governor-General of the Sudan, Sir Knox Helm, reacted swiftly to the mutiny. With Helm's assurances of a pardon, the Torit rebels surrendered, and Nasser lost a chance to destabilize the Sudan. By November 1955, British and Egyptian troops had been substantially withdrawn from the Sudan. At that point, Helm proposed to Nasser that the Sudan be declared an independent state. Nasser rejected Helm's proposal on the ground that the Egyptian people still believed in the unity of the Nile valley. Britain reacted by informing Azhari that he should declare independence on 1 January 1956. Furthermore, the British assured Azhari that he could count on their support should Nasser attempt to derail Sudanese independence. Sir Knox Helm then took his annual leave, and Azhari declared the Sudan an independent sovereign state at the Governor-General's palace on the morning of 1956's new year's day. Britain then instantly recognized the independent Sudan, and Nasser had no choice but to follow.⁹⁴ In short, Azhari and Helm handed Nasser a humiliating defeat.

From 1 January 1956 until November 1958, every Sudanese government rejected Egypt's proposals for a dam on the Nile at Aswan. Furthermore, the Sudan refused to recognize the 1929 Nile waters agreement. In addition, Sudanese politicians appeared in Halaib to campaign for votes in February 1958. Halaib is a triangle of land on the Red Sea (far away from the Nile) whose ownership is disputed by Egypt and the Sudan. Nasser issued an ultimatum demanding the withdrawal of Sudanese administrative and police organs from Halaib. When talks with Nasser failed, the Sudanese government petitioned Dag Hammarskold to convene a Special Session of the UN Security Council.

⁹⁴Ibid., pp. 113- 115.

At that point, Nasser abandoned his campaign to absorb Halaib. Egyptian military units heading toward Halaib were turned back. In the wake of the Halaib affair, the anti-Egyptian Umma Party won the Sudanese elections in a landslide.⁹⁵ Only one person (an Egyptian officer) is said to have been killed during the dispute.

As stated earlier in the sections pertaining to the 1959 Nile Waters Agreement and the construction of the Aswan High Dam, Egypt abandoned the dispute over Halaib and began a campaign to destabilize the elected Sudanese government through economic sanctions and propaganda. Nasser also invited a *coup d'etat* in the Sudan. Major-General Ibrahim Abboud deposed the Umma government in November 1958. Abboud was smitten by Nasser. He capitulated to all of Egypt's demands, and thereby compromised the country's independence from Egypt.⁹⁶ While the initial opposition of the overwhelming majority of the Northern Sudanese political spectrum to the Sudan's unequal political relationship with Egypt is easy to comprehend, the failure of the Umma Party and the NUP to reverse this policy after Abboud's departure remains a puzzle. It would follow that the restoration of democracy in Northern Sudan would have led to the cancellation of the 1959 Nile Waters agreement and the expulsion of Egyptian hydrological technicians from the Sudan, but this did not take place. The current Sudanese Islamic Fundamentalist government which has aided anti-government terrorists in Egypt continues to abide by the 1959 agreement and cooperates with Egypt over Nile issues. In fact, Abboud is considered a hero by Sudanese Islamic fundamentalists. The

⁹⁵Ibid., pp. 285-286.

⁹⁶Ibid., p. 287.

Sudan's initial rejection of the 1959 Nile Waters agreement suggests that its later acceptance of Egypt's demands was and is not premised on Sudanese material interests.

The 1958 confrontation was initiated by Egypt. Egypt had been facing Sudanese opposition to its Nile schemes, and Halaib may have been a diversionary move on the part of the Egyptians. The root of the dispute, however, was Egypt's *de-facto* rejection of the Sudan's independence. The British managed to subvert Egypt's voice in the condominium with regard to the Sudan's independence, and Nasser was probably nursing a grudge against the Sudanese. In addition, Egypt regards the Sudan as its "backyard," and it could never allow it to become truly independent. It is noteworthy that the Umma Party did not object to relations with Egypt *per se*; it simply rejected Egyptian hegemony before 1958. The imperialist impulses that motivated Mohammed Ali and *Khedive* Ismail did not end with the overthrow of their dynasty, and Nasser was imitating Mohammed Ali in Syria as well as the Sudan. The relationship between the confrontation and water disputes is far less than causal. This argument is supported by several factors. First, this case study has already illustrated that the Aswan High Dam was not built for hydrological reasons; consequently, disputes over the dam are really disputes about *Egypt's right to control the river*. Second, Nasser's imperious tendency is a matter of fact. He united Syria and Egypt to form the United Arab Republic and attempted to destabilize pro-Western Lebanon prompting the United States to intervene in 1958. Third, Nasser had opposed Sudanese independence, and his subsequent policies towards the Sudan reveal that he did not regard it as a sovereign country. Fourth, the conflict over Halaib illustrates that Egypt seeks to dominate the Sudan even in areas where the Nile is not a factor. The confrontation of 1958 was not about Nile Waters or the territory of Halaib, it

was about Egypt's desire to dominate its Southern neighbor. The Halaib dispute has re-erupted recently, and the territory currently has competing administrations. Despite Egypt's entry into Halaib, the Sudanese government has not altered its pro-Egyptian policies on the Nile. The Sudanese government questioned the agreement only once. During the Operation Desert Storm, the Islamic fundamentalist government of the Sudan threatened to shell the Aswan High Dam, but made no attempt to actually do so.

SUDANESE CIVIL WARS

The current Sudanese civil war is the country's second internal conflict. Abboud aimed to impose Islam and the Arabic language on the Southern Sudan. He forbade Christian missionaries from operating in the South and took over their schools. He sought to make the Sudan an Arabic-speaking Muslim country. Naturally, the people of the Southern Sudan could not accept the forceful imposition of an alien language and an alien religion. By the 1960s, the Southern Sudan had developed a political party opposed to Northern rule, the Sudan African National Union (SANU), and a loosely organized independent rebel army centered around some of the Torit rebels who had rejected Nimeiri's pardon -- the *Anyanya* or "Snake Poison." The rebels received support from the Democratic Republic of the Congo, Uganda, Israel, and other countries.⁹⁷

Israel aided the *Anyanya*, because it sought to destabilize Egypt's ally -- the Sudan. In the early to mid-sixties, Ugandan leader, Apollo Milton Obote had identity-based reasons to support the Southern Sudanese. "The Uganda Government sympathized

⁹⁷Francis M. Deng *War of Visions: Conflict of Identities in the Sudan* (Washington, D.C.: The Brookings Institution, 1995), p. 12; Holt and Daly, *A History of the Sudan*, pp. 181-183, 200.

with the *Anya Nya* fighters in the South, interpreting the civil war in racial terms as a struggle of Africans against Arab domination."⁹⁸ Obote later shifted Uganda's position towards Nasser, the Arabs and the non-aligned movement, because most of his neighbors had adopted pro-Palestinian positions after the 1967 Six Day war. Consequently, the *Anya Nya* intervened in Ugandan politics and helped depose Obote in 1971. With the establishment of Idi Amin Dada on the seat of power in Uganda, the rebels could again count on Israeli and Ugandan aid. As a Langi, Obote's earlier policy could be understood as solidarity with the Southern Sudanese who included many of his fellow Nilotes in their ranks (the Dinka, Shilluk, Nuer tribes in Southern Sudan). Amin had similar motives. His West Nile Province tribe, the Kakwa, speaks a Sudanic language which is closely related to some non-Nilotic languages in Southern Sudan. Despite being a Muslim, Amin would support the Southern Sudanese until they reached an agreement with the Sudanese government.⁹⁹ Phares Mutibwa, an Ugandan scholar, explains the multi-layered nature of Amin's identity:

Amin's background-being a Kakwa-Nubian and a Muslim, and coming from West Nile- was crucial in the events that followed. One writer has aptly observed that "as he became older and acquired power, he considered himself first and foremost a Nubian/Kakwa, secondly a Muslim, thirdly, a West Niler and fourthly a[n] Ugandan. Consequently, the closest people around him came in this order which was later repeated in his choice of senior operatives and agents."¹⁰⁰

⁹⁸Amii Omara-Otunnu, *Politics and the Military in Uganda, 1890-1985* (New York: St. Martin's, 1987), pp. 52, 66, 95.

⁹⁹Phares Mutibwa, *Uganda Since Independence, A Story of Unfulfilled Hopes* (Trenton, N.J.: Africa World Press, 1992), p. 90.

¹⁰⁰Ibid., p. 81. In Uganda, the term "Nubian" means a descendent of the Sudanese troops stationed in Egypt's Equatorial garrisons. It has also come to mean a Muslim West Nile tribesman

As Obote and later Amin aided the Southern Sudanese, the Arab world aided the Sudanese government. Consequently, the Sudanese civil war intensified and hundreds of thousands of Southern Sudanese either lost their lives or fled into exile in neighboring states. As early as the mid-sixties, the strain of the war brought intense opposition to Abboud in Northern Sudan. By 1964, professional, student, and labor unions began to indicate their opposition to the government. Junior officers in the army were plotting to overthrow Abboud, and no solution seemed to be in sight for the Southern problem. In response to these pressures, Abboud dismissed his cabinet. He appointed a transitional apolitical Prime Minister and an all-party government including two independent Southern Sudanese ministers. Abboud realized that he could not rule the Sudan after his troops fired on protestors and killed twenty people. On 14 November 1964, Abboud resigned as chief of state, and the *de jure* democracy was restored.¹⁰¹

The restoration of democracy did not end the war in Southern Sudan. A round table conference was organized in Khartoum on 16 March 1965. SANU and other Southern parties negotiated with the government and with Northern opposition parties. The conference failed to produce a solution to the civil war, and SANU and the other Southern parties could not persuade the *Anya Nya* to negotiate a peaceful end to the war. By 1968, the Southern parties lost all incentive to cooperate with the government. William Deng, the president of SANU, was killed in Bahr al-Ghazal in May 1968. The killers are assumed to have been members of a government patrol. Furthermore, the

¹⁰¹Deng, *War of Visions*, p. 12; Holt and Daly, *A History of the Sudan*, pp. 181-183.

political situation in Northern Sudan was unstable. A succession of weak coalition governments could not develop the economy or solve the problem of the civil war in Southern Sudan. The army and the *Anya Nya* began a cycle of atrocities that continued until the end of the war. As in 1958, the instability of the polity tempted the army to depose the elected government, and Colonel Ja'afar Mohammed al-Nimeiri and a junta of colonels and junior officers took power in a bloodless coup on 25 May 1969.¹⁰²

Nimeiri immediately promoted himself to Major General, and began negotiations with the *Anya Nya*'s nascent political arm, the Southern Sudan Liberation Movement, in Addis Ababa, Ethiopia. Through the mediation of Ethiopian Emperor Haile Selassie, the government and the SSLM/*Anya Nya* agreed on a formula for the autonomy of the Southern Sudan on 27 February 1972. Nimeiri's government implemented its agreement with the SSLM as the *Regional Self-Government Act for the Southern Provinces*. The agreement provided an autonomous government for the Southern Sudan, with an elected assembly and a cabinet. The Southern Sudanese would control their own local governments, educational policies, public health, mineral and natural resources, and police forces. The central government in Khartoum retained control over foreign relations, defense, currency, and intra-regional affairs. The *Anya Nya*'s troops were incorporated into the Sudanese People's Armed Forces.¹⁰³ The agreement worked for more than a decade, and the guns remained silent until 1983.

¹⁰²Holt and Daly, *A History of the Sudan*, pp. 181-194.

¹⁰³*Ibid.*, pp. 194-202.

The second and current Sudanese civil war erupted in 1983. Nimeiri's desire to abandon the Addis Ababa accords was the primary factor in the renewal of the war. First, on 1 June 1983, Nimeiri abolished the Southern region and created three regions in the South that correspond to three old Southern Provinces. Second, he imposed Islamic law on the whole country. By September 1983, Southern units in the Sudanese army revolted.¹⁰⁴ To complicate matters, the Southern Sudanese soon split into three factions: the mainline Sudanese People's Liberation Army (SPLA), SPLA-Bahr al Ghazal, and the Nasir-SPLA. Unlike the mainline SPLA, the smaller dissident factions preferred to either settle with the government or to argue for the independence of Southern Sudan -- a goal renounced by the mainline (Torit) SPLA.¹⁰⁵ At the time of writing, the Bahr al-Ghazal SPLA has returned to the fold. Initially, the SPLA itself was a junior competitor of the *Anya Nya* II, but it soon eclipsed and absorbed its rival, despite considerable initial difficulty. John Garang de Mabior, the leader of the SPLA, estimated that some sixty percent of his troops came from the *Anya Nya* II.¹⁰⁶

With the growth of the SPLA, Nimeiri turned to his primary overseas ally--the United States--for assistance. As the only Arab leader who stood with Egypt after the Sinai accords, Nimeiri could count on some measure of United States assistance. Nimeiri

¹⁰⁴Sharif Harir and Terje Tvedt, "Forward," in Sharif Harir and Terje Tvedt, eds., *Shortcut to Decay: The Case of the Sudan* (Uppsala, Sweden: Nordiska Afrikainstitutet, 1995), p. 5.

¹⁰⁵Raphael Badal, "Political Cleavages within the Southern Sudan: An Empirical Analysis of the Re-Division Debate," in Sharif Harir and Terje Tvedt, eds., *Shortcut to Decay: The Case of the Sudan* (Uppsala, Sweden: Nordiska Afrikainstitutet, 1995), pp. 105-126.

¹⁰⁶John Garang de Mabior, *The Call for Democracy in Sudan*, Mansour Khalid, ed., (New York: Kegan Paul International, 1995), pp. 54-55.

had buttressed his relationship with the United States through what seemed to be a firm commitment to secularism and multiculturalism. Nimeiri's image in the United States remained constant, despite his abandonment of the Addis Ababa accords-which were the underpinnings of secularism and multiculturalism. For the United States, the Sudan's strategic location and support for the Camp David accords mattered more than America's democratic values.¹⁰⁷ Domestically, Nimeiri's intolerance grew. Early in 1985, Nimeiri and his new National Islamic Front (NIF) allies sentenced Mahmoud Mohammed Taha to death. The 76-year old Taha was the founder of the Sudan's Republican Brothers -- an Islamic movement stressing tolerance and co-existence with non-Muslims. Taha was hanged on 18 January 1985. Within two months, Nimeiri turned on the National Islamic Front, and imprisoned its leaders.¹⁰⁸ Taha's hanging marked the end of any hopes for a secular Sudan.

Given Ethiopia's support for the SPLA, Nimeiri argued that the SPLA was a Marxist insurgency. Libya had been aiding the SPLA too, and the United States found itself bound to support Nimeiri. The Sudanese president visited the United States on 27 March 1985, and was welcomed by President Reagan. During his plane's refueling stop in Egypt, the Sudanese Army deposed him. General Swar al-Dhab, led the revolt. He promised a return to democracy and an end to the civil war. Much to the consternation of the United States and Egypt, he normalized relations with Libya-which promptly withdrew its support from the SPLA. General Swar al-Dhab failed to accomplish the

¹⁰⁷Deng, *War of Visions*, pp. 363-369, 376-377.

¹⁰⁸Sharif Harir and Terje Tvedt, "Sudan Chronology Since 1972," in Sharif Harir and Terje Tvedt, eds., *Shortcut to Decay: The Case of the Sudan* (Uppsala, Sweden: Nordiska Afrikainstitutet, 1995), pp. 266-267.

goal of peace in the South, partially because the NIF rejected peaceful solutions. He did, however, restore democracy in the Sudan. The Umma Party won the April 1986 elections, and Sadiq al-Mahdi, a descendent of the Mahdi, formed a broad-based government. General Swar al-Dahab ceded power to the elected government and retired from military service on 6 May 1986. Sadiq attempted to end the war through negotiations, but his need for NIF support in Parliament prevented him from meeting the SPLA halfway. Sadiq suspended Islamic law, and tried to abolish it. The Democratic Unionist Party, a former coalition partner, managed to reach an agreement with the SPLA for a ceasefire in 1988. But with no end to the civil war in sight, Sadiq lost his credibility. Subsequently, the NIF, with support from certain sectors in the army, overthrew Sadiq on 30 June 1989. The new government, dominated by the NIF and its sympathizers in the military, declared its opposition to the DUP-SPLA agreement. The government of Lt. General Omar al-Bahsir and Hassan al-Turabi continues the war against the SPLA and has constantly refused to compromise on the issue of the "September laws" -- as Islamic law came to be known in the Sudan.¹⁰⁹

On 10 December 1996, Sadiq al-Mahdi fled from house arrest to Asmara, Eritrea. Upon arrival in Asmara, Sadiq placed his Umma Party in a military coalition (the National Democratic Alliance) that encompasses the SPLA, the DUP, the Beja National Congress, and other groups. For Sadiq and his Umma Party, the only remaining alternative for dealing with the current government is armed struggle.¹¹⁰ The war has

¹⁰⁹Ibid., pp. 268-270; Holt and Daly, *A History of the Sudan*, pp. 217-225; Garang de Mabior, *The Call*, pp. 54-55.

¹¹⁰Ma'aouya Yas, "A Horse and a Party to Thwart Bashir's Organs: Al-Mahdi Left, When Will al-Turabi Leave?" *Al-Wasat*, (16 December 1996), pp. 16-18. In Arabic.

been a pendulum-like affair. The government scores victories only to see the SPLA revive itself and fight back. After a short pause and even support for the Sudanese government, the new governments in Ethiopia and Eritrea continued the Marxist junta's (*Dergue*) policy of supporting the SPLA, because the Sudan began to support new Islamic insurgencies within their borders. Ethiopia, Eritrea, Uganda, the United States, and perhaps Israel have been aiding the rebels. Egypt does not assist them, even though it accuses the Sudanese government of terrorism. In a speech in Kampala, Uganda, the U.S. Secretary of State, Madeleine K. Albright, indicated United States support for the SPLA and its allies in the Sudanese civil war. She offered \$20 million in military aid and weapons to Eritrea, Ethiopia, and Uganda. Albright also met with the leaders of the six factions in the rebel National Democratic Alliance which includes the SPLA.¹¹¹

The SPLA and its allies are fighting the government over the issue of Sudan's national identity. As Francis Deng, a scholar at the Brookings Institutions, argues, the root of the war is a "war of visions" concerning the identity of the country. It is not a simple North-South war, but a war about "what" the identity of the Sudan is. Many Northerners agree with the SPLA's description of the Sudan as an African country. These Northerners are now squarely in the SPLA's camp, which now includes even the neo-Mahdists of the Umma Party. Deng uses terms like a "crisis of identity" to describe the causes of the Sudan's problems. He argues that the Sudan has much in common with

¹¹¹James McKinley Jr., "Albright in Uganda, Steps Up Attack on Sudan's Reign of Terror," *The New York Times* (11 December 1997), p. A7; Yasin Miheisi, "Sudan-Uganda Tug of War, Intensified Exchange of Accusations, and Opposition Victories," *Sudan News and Views*, No. 27 (1 July 1997), <<http://webzone1.co.uk/www/sudan>>, accessed 20 December 1997.

apartheid-era South Africa, and that the Arabized Islamic Northern section of the country is attempting to impose its identity, especially its component language and religion, on the rest of the country. For Deng, this is the most important factor in the causes of the war.¹¹² Deng's argument is supported by Peter Nyot Kok's analysis of the Sudan as a *Jellaba* (literally: the robe-wearers or Arabized Muslim Northern Sudanese) state. Kok, a Southern Sudanese scholar working in Germany, combines his cultural analysis with economic observations:

The *Jellaba* saw and still see their interests as lying in maintaining their hegemony by all means. Their approach to the unavoidable historical task of state- and nation-building was and still is self-centered and self-serving. Their priority in the consolidation of their grip on, and privileged position in, the Empire on the Nile which was bequeathed to them by the British. In constitutional terms, the *Jellaba* sought to impose the conservative-hegemonic model of state and nation-building: e.g. establishing the Islamic State, and building a Sudanese nation united by Islamic religion, Arabic language and Arab culture. In economic terms the *Jellaba* pursued a top-down model of economic development which aggravated the marginalization of the peripheral Sudan-the lands of the Nubas, the Nubians, the Beja, and of the Southern Sudanese. The "center," i.e. the region along the Dongola-Kosti axis, which is also the cradle and the heartland of the *Jellaba*, became, as it were, the power-house of the Sudanese economy, although this "center" itself constitutes a "periphery" in the context of the global economy. In the process, the *Jellaba* control of the Sudanese state and economy, and their consolidation of that control, have resulted in grave injustices for the rest of the Sudanese, injustices which, with time, have become structural to the very institutions and processes of the *Jellaba* state. An attempt is made in this work to show how such structural injustices cannot effectively be redressed in simple power-and-wealth-sharing in a Federal or regional autonomous context. Such constitutional arrangements cannot dismantle the structures of hegemony.¹¹³

¹¹²Deng, *War of Visions*, pp. 15-16.

¹¹³Peter Nyot Kok, *Governance and Conflict in the Sudan: Analysis, Evaluation and Documentation* (Hamburg: Deutsches Orient-Institut, 1996), pp. 14-15.

Kok's economic analysis of the conflict in the Sudan is heavily dependent on cultural variables. The *Jellaba* economically and politically discriminate against non-*Jellaba* for reasons that have little to do with business and political power. To a large extent, the *Jellaba* have allowed their own security and economic well-being to be sacrificed in the pursuit of the Arabization and Islamization of the Sudan. Thus, it can be argued that the *Jellaba* perspective values the promotion of Islam and the Arabic language above profits and security. This preference explains the Sudan's strange attachment to Egypt and the failure of the Umma Party and the DUP to stand squarely against Islamic law during the last democratic government. The construction of the Sudan's national identity shall be explored in depth in a later section. Cultural factors are the crucial cause of war between Northern and Southern Sudan. Water disputes have played a minimal role in the conflict. The SPLA's destruction of the bucketwheel was spectacular, but the Jonglei canal was not the cause of the revolt. The cause of the war lies in the cultural policies pursued by the Sudan's Arabic-speaking rulers. Eritrean President Isaias Afowerki has elegantly summarized the policy of successive Sudanese governments towards the South:

Regard the Southerners as inferior; impose Islam and Arab culture on the South, supplement this cultural aggression by force and violence; deprive the South of a meaningful sharing of power and the country's resources; exploit and manipulate the serious weaknesses of and secondary divisions among the Southerners; pursue policies and measures that push the South towards secession and then accuse it of secessionism; establish external alliances one after the other to weaken and crush the Southern cause; routinely enter into promises and just as routinely betray them; and grant nominal and short-lived autonomy. ¹¹⁴

¹¹⁴Isaias Afowerki, President of Eritrea, "Conflict in the Sudan," Paper presented at the 7th Pan-African Congress, Kampala, Uganda (14 April 1996), p. 6 as cited by Kok, *Governance and Conflict*, p. 15.

Afowerki was a Sudanese government ally during the Ethiopian Civil War, so his words carry a measure of credibility that some Southern Sudanese analysts may not enjoy. In addition, his forces had attacked the SPLA in 1991, so he is a newcomer to the SPLA camp. Until 1993, Eritrea had good relations with the Sudanese NIF government. The NIF's decision to support the Eritrean Islamic Jihad organization may have doomed the relationship.¹¹⁵ As beneficiaries of the Sudanese government's aid both during Nimeiri's rule and afterwards, the Eritreans have acquired first hand knowledge of the Sudan and its problems.

The problems of the Sudan are many. During the current Sudanese civil war, about 1.5 million people have died, and the slave trade has been revived. Sudanese Arab slave raiders openly raid for slaves in Southern Sudan, and various western charities pay thousands of dollars to purchase the freedom of Southern Sudanese slaves. The only positive consequence of the war has been the development, in the North, of interests opposed to the war and the policy of enslavement, Arabization and Islamization. The first Northern Muslim groups to side with the SPLA were the Fur tribesmen of the Western Sudan and Ingassana of the Blue Nile Province. Gradually, the SPLA has added allies from the Muslim Beja and the religiously diverse Nuba of Kurdufan. It is important to note that none of these groups speaks Arabic. The SPLA has also added the DUP and the Umma Parties to its list of allies -- traditional parties that represent Northern Arabic-speaking Muslims. The SPLA has recently signed separate peace accords with

¹¹⁵Tesfatsion Medhanie, *Eritrea and Neighbors in the "New World Order" -- Geopolitics, Democracy and "Islamic Fundamentalism,"* Bremer Afrika-Studien Band 15 (Hamburg, Germany: LIT Verlag, 1994), pp. 78-101.

Baqqara Arab tribes, such as the Rizegat and Misiriyah, that have traditionally favored the NIF government. The SPLA's vision of a secular, pluralistic Sudan seems to be gaining converts in Northern Sudan. Speaking from exile (probably from Eritrea), Sadiq al-Mahdi argued that the SPLA's agreements with the Rizegat and Misiriyah will serve as the model for establishing peace in the Sudan. "We have encouraged all Arabs to make peace with their brothers to end the war being waged by the National Islamic Front government," claimed Sadiq.¹¹⁶ These small peace accords are a source of hope, because the of the failure of recent direct negotiations between the government and the SPLA in Kenya. Change in the Sudanese polity, along the lines supported by the SPLA and Sadiq al-Mahdi, would go a long way to pacify the Sudan's relations with Eritrea and Ethiopia. The NIF is attempting to destabilize Eritrea and Ethiopia by arming Islamic militants in both countries. Ethiopia and Eritrea are targets of Sudanese intrigue because of their close relations with Israel and the United States. Medhanie, an analyst of the Horn of Africa, sees this relationship as an impediment to Eritrean independence, but it probably reflects the secular values of the governments in Asmara and Addis Ababa.¹¹⁷

ERITREAN WAR OF INDEPENDENCE

¹¹⁶Deng, *War of Visions*, pp. 460-463, 483; Joint Military Command/National Democratic Alliance, 1 July 1997, "Joint Military Command Press Release," *Sudan News and Views* No. 27 <<http://webzone1.co.uk/www/sudan>>, accessed 20 December 1997; Karin Davies, "As Civil War Ravages Sudan, Soldiers Use Slaves for Payment," *The Virginian-Pilot* (13 February 1998), p. A17; Karin Davies, "Decrying Sudanese Influence, Factions Cling to Peace Pacts -- Arabs, Black Christians Find Ways to Coexist," *The Virginian-Pilot* (13 February 1998), p. A19.

¹¹⁷Medhanie, *Eritrea and Neighbors*, pp. 23-26, 129-131.

Ethiopia's relationship with the Sudan is historically tense. The Sudan allowed Eritrean fighters to use its territory in their campaign against Ethiopia and though its army confronted Ethiopia on the border, there were no full wars between the two countries. In 1972, Emperor Haile Selassie brokered the Addis Ababa accords which ended the first Sudanese civil war. Nevertheless, Ethiopia complained that the Sudan continued to allow the Eritreans to use its territory as a base. In 1975, with the Emperor Haile Selassie deposed, Sudan attempted to mediate between the new junta (the *Dergue*) and the Eritreans, but the negotiations faltered. A year later, the so-called "mercenary" leftist coup was attempted in Khartoum. Nimeiri blamed the Soviet Union, Libya and Ethiopia for the coup attempt, and the Sudan recalled its ambassador from Ethiopia in 1977. A tense, sometimes violent, stand-off took place for between the Sudanese and Ethiopian armies at the border for several years afterwards. Nimeiri supported Somalia during the Somali-Ethiopian Ogaden conflict and began to more actively support the Eritreans. In retaliation, Ethiopia began to support the SPLA. Nimeiri was overthrown in 1985, but the new Sudanese government could not reach an agreement with Ethiopia about the SPLA or the Eritreans.¹¹⁸

Aside from the war in Eritrea, Ethiopia also faced a number of other internal civil wars. These can be described by region: Tigray, Oromia, and the Ogaden. The Western Somali Libetration Front revolt in the Ogaden can be regarded part of the conflict

¹¹⁸Edmond J. Keller, "Chapter 4: Government and Politics" in Thomas Ofcansky and LaVerle Berry, eds., *Ethiopia: A Country Study* (Washington D.C.: U.S. Government Printing Office, 1991), <<http://lcweb2.loc.gov/frd/cs/ettoc.html>>; Thomas Ofcansky, "Chapter 5: National Security," in Thomas Ofcansky and LaVerle Berry, eds., *Ethiopia: A Country Study* (Washington D.C.: U.S. Government Printing Office, 1991), <<http://lcweb2.loc.gov/frd/cs/ettoc.html>>.

between Somalia and Ethiopia; in addition, the Ogaden is outside the Nile basin and outside the ambit of this case study. The Eritrean revolts, however, were more critical, because of the Sudan's involvement. The Eritrean Liberation Front (ELF) revolted against Ethiopian rule in 1961 with 11 guerrillas. Its strength slowly grew during the 1960s. By 1970, the ELF was large enough to fracture into two: the quasi-Marxist and certainly socialist Eritrean Popular Liberation Front (EPLF) and the ELF proper. During 1972-1974, an internal civil war ensued between these two Eritrean factions. The EPLF defeated the ELF and consolidated its position against the Ethiopian government in rural Eritrea. There was a lull in the fighting while Ethiopia went through the revolution, but once the *Dergue* consolidated its position, it sought to re-integrate Eritrea into Ethiopia. With the fresh arrival of large supplies of Soviet weapons in 1977-1978, the *Dergue* deployed 100,000 troops against both the ELF and the EPLF. The two Eritrean factions combined their forces, which now totaled 35,000 semi-regular troops, to fight the government. The well-supplied Ethiopian army, however, was able to recapture most of Eritrea and to destroy the ELF; the EPLF, on the other hand, survived.¹¹⁹

With the EPLF left as the only effective Eritrean rebel movement, it began to consolidate its hold on the areas left in its control. It sought and received Sudanese help, which ultimately meant United States help, since the United States was backing the Sudan in its confrontation with Ethiopia. The EPLF withstood 6 major Ethiopian offensives and emerged stronger in the 1980s. It began to deploy captured armor against the government and assisted the Tigray People's Liberation Front (TPLF) in its war against the Ethiopian government. The TPLF was founded in 1975, and engaged in little

¹¹⁹Ibid.

more than rural terrorism against traffic at first. It slowly grew thanks to Eritrean support, and the negative impact of the *Dergue's* Eritrean campaigns on rural areas of Tigray province. The TPLF, now indirectly Western-supported, was able to depose the *Dergue* by capturing Addis Ababa in 1990, which ensured Eritrean independence. Unlike the wildly successful TPLF and the EPLF, the Oromo Liberation Front has not been able to attract the same degree of support from the Oromo areas it claims. It was founded in 1973 and has received some Sudanese support. It was a distraction for the Ethiopian government, which was already fighting several wars at the same time.¹²⁰ The *Dergue's* collapse did not end Ethiopian support the Southern Sudanese. In addition to Ethiopia, newly-independent Eritrea is also supporting the SPLA in order to thwart the current Sudanese government's attempts to export Islamic revolution to the multi-ethnic, secular, and United States-aligned Eritrea.

The Eritrean war for independence can be traced to the death of Yohannes IV. After his death, the Ethiopian Empire had fallen into chaos until the rise of Menelik. The Italians took advantage of the chaos and expanded their domains to include all of today's Eritrea. Most of the country had been under Egyptian control during the 19th century, and the Ethiopian Emperor's authority there was nominal throughout most of the territory's history. Eritrea has nine ethnic groups, and each was affected differently by Italy. About half the people belong to the Coptic Church and the rest are Muslims. Italy's presence altered the region for good. Italy broke down the communal, quasi-feudal, and traditional structures of Eritrean life and society. Upon the conquest of

¹²⁰Ibid.

Ethiopia in 1936, the Italians made Eritrea the industrial center of their East African Empire. About 60,000 Italians lived in Eritrea among one million Eritreans. The British defeated the Italians in 1941 and took over Eritrea, but they made no substantial changes in Italy's policies there. They did, however, end some of Italy's racial laws and preferences. In 1951, the British "returned" Eritrea to Ethiopia under an agreement that allowed Eritrea autonomy in domestic affairs. But Emperor Haile Selassie had no desire to respect Eritrean autonomy. He disestablished education in Tigrinya (for Christians) and Arabic (for Muslims) in favor of Amhara -- the official language of Ethiopia. He also abolished the country's separate autonomous government, prompting the ELF to begin an armed struggle against both his government and its immediate successor -- the *Dergue*. In essence, the war was fought for the national independence of Eritrea. The Eritreans were motivated by a strong sense of non-ethnic territorial nationalism. The Ethiopians, on the other hand, were motivated by their imperial tradition during Haile Selassie's reign. His vision of an Ethiopia that encompasses Eritrea was also shared by the men who overthrew him, albeit in Marxist guise.¹²¹

Finally, it is important to note that some may argue that the Ethiopian (and Sudanese) civil wars have helped Egypt.¹²² In reality, these wars have hurt Egypt. The civil wars derailed Ethiopia's proposed water development projects as well as soil conservation projects. While it is clear that Ethiopia has not been able to hold back any

¹²¹Roy Pateman, *Eritrea: Even the Stones Are Burning* (Trenton, NJ: The Red Sea Press, 1990), pp. 3-23.

¹²²Scot E. Smith and Hussam M. Al-Rawahy, "The Blue Nile: Potential for Conflict and Alternatives for Meeting Future Demands," *Water International*, Vol. 15, No. 3 (1990), p. 218.

water for its use, Egypt's supply base still remains lower than it would be if upstream storage had been negotiated with Ethiopia, as shown earlier. Furthermore, Ethiopia's inability to implement soil conservation policies brought high volumes of soil to the Sennar, Khashm al Girba, and Aswan High Dam reservoirs. The sedimentation has shortened the dams' operational lives and usefulness. By refusing to cooperate, Egypt is shortening the life-span of its own Nile management infrastructure.¹²³

THE CHAOS IN UGANDA

Throughout Uganda's turbulent history, the Owen Falls dam has not been a factor in the country's internal or external conflicts. In February 1979, Amin threatened to destroy the dam and poison the river.¹²⁴ But, Amin was grasping at straws, because he was facing a Tanzanian invasion and increasing dissent at home in 1979. Uganda's internal and external armed conflicts have been largely about ethnicity; more specifically, they have been about which politician or military leader, with the support of his ethnic or religious community, gets to rule the country. As implied in the earlier discussion about Amin's and Obote's support for the Southern Sudanese, Northern Uganda is very similar to the Southern Sudan in terms of its ethnic and linguistic composition. The Sudanic peoples of Uganda's West Nile Province are linguistically related to the peoples of the Sudan's Equatoria Province. The Alur, Langi, and Acholi peoples of Northern Uganda share linguistic similarities with the Dinka, Shilluk and Nuer. The Nilo-Hamitic peoples

¹²³S. April Smith, "A Revised Estimate of the Life Span of Lake Nasser," *Journal of Environmental Geology and Water*, Vol. 15, No. 2 (1990), pp. 123-129.

¹²⁴Atekar Ejalu, "Amin's Doomsday Plans," *New African*, (March 1979), pp. 47-50.

of the Uganda's Northeast are also represented in the Southern Sudan. In Southern Uganda, Bantu-speaking peoples (Baganda, Batoro, Bakiga, Banyankile, Banyoro and others) represent the overwhelming majority of the population. In addition to these ethnic differences between Ugandans, religion has also divided the country. Catholics and Anglicans are the largest religious communities in the country. These two Christian denominations, together with some indigenous forms of Christianity, have the following of 66 percent of the population. Sixteen percent of all Ugandans are Muslim, and most of the remaining 18 percent follow traditional African religions. These religious preferences cut across all ethnic lines. Uganda's diversity led the British to consid ceding Northern Uganda to Southern Sudan while they were devising the country's map, but they quickly discarded that idea.¹²⁵ As a result, Uganda faced a daunting task of nation-building at independence.

In 1962, independence was secured through an alliance composed of the the protestant, Northern based Uganda People's Congress (UPC) and the the *Kabaka Yekka* party. Under Prime Minister Appollo Milton Obote (a Langi from Northern Uganda), the UPC favored a centralized state, but the *Kabaka Yekka* (the "king alone") party favored the continuation of the *status quo* which granted the kingdom of Buganda a federal status within Uganda. Three other kingdoms also enjoyed limited federal powers, but Northern Uganda was under direct British rule. Uganda's independence constitution reflected the arrangements the British had made with the traditional rulers, especially the kings of Buganda who had acted as Britain's agents in the 19th century. The State President of Uganda, Sir Edward Mustea II, was also the *Kabaka* (king) of Buganda; Like

¹²⁵Mutibwa, *Uganda Since Independence*, p. 4.

Obote, Mustea was an Anglican. Nevertheless, a power struggle broke out between Mustea II and the Prime Minister. In 1966, Obote used Amin and the army to rout Mustea and his Bugandan supporters, and the king barely escaped with his life to fly into exile in Britain where he died in poverty three years later. The Bugandans were defeated despite being the largest ethnic group, because they were under-represented in the army. The *Kabaka* did have non-Buganda supporters in the army such as General Shaban Opolot, but Obote had forced them into retirement. The British had favored Northern tribes for the army, because they felt that Northern tribes are more politically reliable in Southern Uganda -- the center and core of the country. Young Bugandan men were discouraged from military pursuits, and their kingdom paid a dear price for its civilian orientation. In 1967, Obote abolished the kingdoms, and established a republic. The army was allowed to ravage Buganda and appropriate for itself what it could.¹²⁶

But Amin's alliance with Obote was short-lived. Obote began a nationalization program that alienated the British and the business community. In foreign relations, he began to side with the Arab world against Israel. He also further alienated Britain by protesting its South African arms sales program. In addition, he ended his support for the Sudanese *Anyar Nya* in order to secure his position in the Arab world. These four groups (the British, the businessmen, the Israelis, and the Southern Sudanese) became increasingly threatened by Obote, and began to look for a replacement. Obote also planned to rid himself of Amin through the same procedures he used to oust Opolot. Amin was aware of Obote's plans, and planned to overthrow his ally and mentor. He also

¹²⁶Mutibwa, *Uganda Since Independence*, pp. 22-64; Omara-Otunnu, *Politics and the Military*, pp. 48-77.

began to attend the prayer meetings of an Islamic group headed by the Mustea's Muslim uncle in order to indirectly court Bugandans. With British, Israeli, *Anyanya*, and Bugandan support, Amin initiated his military take-over on 25 January 1971 when Obote was out of the country. Obote found himself exiled in Tanzania.¹²⁷

Initially, Amin followed a policy of religious pluralism and alliance with Britain and Israel. He allowed the Bugandans to bring Mustea's body home from Britain and gave him a state funeral. He reversed Obote's nationalization policy to the delight of both local and British businessmen. He put Uganda squarely on the side of the Southern Sudanese. Israeli advisors returned to Uganda, and Amin was facing a degree of isolation in Africa for his pro-Western policies. But, Amin was ordering Acholi and Langi army officers and enlistees secretly executed, because he believed them to be loyal to their fellow Lwo-speaker, former President Obote. He stepped up recruitment of his countrymen from the West Nile province to replace the murdered or discharged Acholis and Langis. His troops also devastated Acholi and Langi areas in Northern Uganda. Once the Southern Sudanese reached a settlement with Nimeiri in the Sudan, he felt that he no longer needed the Israelis, so he ordered them expelled. He also felt that the Israelis understood his *modus operandi* and feared that they would depose him. At the suggestion of Egyptian President Sadat, he had approached Libya for military aid, and by April 1972, Israel and Uganda ended their relationship. Amin then turned his eyes on the Ugandan South Asian community. He expelled it to Britain and other Commonwealth countries after nationalizing its assets. In June 1972, Idi Amin and Nimeiri signed a military pact binding each country to assist each other in case of an external attack. Amin

¹²⁷Omara-Otunnu, *Politics and the Military*, pp. 92-101.

nationalized Uganda's British investments by December 1972. Uganda threatened to invade Tanzania and seize a 100-square mile tract called the Kagera Salient in order to make the Kagera river the natural border between itself and Tanzania. With the new Western hostility towards Amin, Obote and his exiled supporters attempted an invasion with Tanzanian support in September 1972, but they failed.¹²⁸

Amin abandoned his policy of religious pluralism and began actively using the state to promote Islam. He agreed with Qadhafi's arguments about a clash between Judaism and Islam in the Middle East and sought to secure Uganda for his faith. Uganda was admitted to the Organization of the Islamic Conference in February 1974, and Amin began to recruit Muslims into the army and bureaucracy, especially after he survived a Kakwa-led coup. Amin was striving hard to stamp out Christianity in Uganda, and made no apologies for it. On 17 February 1977, Amin executed the Anglican Archbishop of Uganda, Janani Luwum and banned 26 Christian organizations. His bellicose attitudes did not stop at Uganda's borders; in October 1978, Amin ordered his army into Tanzania's Kagera Salient. Tanzania responded by launching an offensive that drove Amin's troops out. Tanzania then invaded Uganda along with various exile groups including Obote's forces, and Amin was deposed in April 1979 by Ugandan exiles and Tanzanian forces. Libya and Zaire attempted to save Amin, but their forces were no match for the Tanzanian army. The dictator fled to Saudi Arabia.¹²⁹

¹²⁸Mutibwa, *Uganda Since Independence*, pp. 78-101; Omara-Otunnu, *Politics and the Military*, pp. 111, 117.

¹²⁹Omara-Otunnu, *Politics and the Military*, pp. 115 123, 137-138, 143; Mutibwa, *Uganda Since Independence*, pp. 109-114.

Amin was gone, but he left a sad imprint on the country, because violence became an integral part of the political system during his rule. Two presidents came and went in 1980, and the country saw the political return of Obote. After winning the 1980 elections that followed Amin's removal, Obote began to punish both Bugandans and West Nilers for opposing him. One faction, the Bantu-based National Resistance Army of Yoweri Museveni, refused to accept the results of the elections and left for the bush country of the Luwero triangle to fight Obote. Obote's troops began to slaughter Bugandans and other Bantus opposed to his rule. Despite all these massacres, Obote failed to secure his rule, because he could not extend his support base beyond the Langi. The Acholis believed that he was using them as cannon fodder against the NRA, so they abandoned their old Langi allies, embraced the West Nilers and marched to Kampala to depose him under their Generals Tito Okello and Bazilio Okello. But the Acholi regime could not reach a true accommodation with Museveni. On 26 January 1986, the NRA ignored the peace agreement it had signed with the Okellos a month earlier by taking over the government.¹³⁰

But Uganda's ethnic conflict is far from over. As pro-Okello scholar Omara-Otunnu points out, the NRA is a Bantu government drawn heavily from Museveni's tribe, the Banyankole and the Buganda. Northern Ugandans no longer enjoy a near-monopoly on soldiering and have not received a real voice in Museveni's government. So, they have resorted to warfare and have found a reliable ally in the Sudanese government. In retaliation for Museveni's assistance to the SPLA, the Sudanese government has been

¹³⁰Mutibwa, *Uganda Since Independence*, pp. 149-177; Omara-Otunnu, *Politics and the Military*, pp. 145-181.

supporting three insurgencies in Uganda. Two Islamic insurgencies have been organized to destabilize the West Nile Province, and an Acholi-based quasi-Christian insurgency called the "Lord's Resistance Army" has been created to disrupt the Acholi and Langi Provinces in Northern Uganda.¹³¹

Armed conflict and the political process became indistinguishable in Uganda. Uganda's basic problem has been the historical inseparability of politics, ethnicity, religion, and violence. Water disputes have not played any role in the country's conflicts, except as an empty threat by Amin-- a man whose identity matrix proved extremely useful for understanding the conflicts in Uganda and the Sudan. As a Kakwa, Amin was very willing to ignore his religious sympathies to support his fellow Sudanic-speakers in the *Anya Nya* (which included the Sudanese Nilotes as well as representatives of virtually every Southern Sudanese group). As a Muslim, he was comfortable in ignoring his affinities for West Nile people who did not share his religion. A West Nile provincial, he gladly sacrificed Ugandan interests to enrich his fellow West Nilers. While Amin's values, goals, and means are clearly not shared by most people in the Nile basin, his approach to his identity is common.

GENOCIDE IN RWANDA AND BURUNDI

The details of this tragic conflict are now generally known to the world outside the Nile Basin. Ever since independence, these two small states have struggled with their dual tribal identities--Hutu and Tutsi. The recent genocide was simply the latest episode of a dispute that has sporadically ignited since independence. As with Uganda, some of the blame for these massacres must rest with Belgian policy in these two territories. They

¹³¹James McKinley Jr., "Allbright in Uganda," p. A7.

preferred the Tutsis, because of political reliability resulting from their minority status. Other analysts blame the scarcity of land for the massacres. These explanations warrant some merit, but they leave some crucial questions unanswered. For example, if the placement of blame on pro-Tutsi Belgian policies as the sole or primary cause of the massacres in these two countries does not account for the fact that the Belgians have been gone for decades. The most recent round of extermination was probably the most vicious episode in this rivalry; in other words, the Belgians have not told Hutu militants to initiate the genocide along the lines it followed.

Second, if pre-colonial society in Rwanda and Burundi entailed peaceful relations between the two groups, why did the two sides adopt "othering" behavior towards each other? The designations "Hutu" and "Tutsi" would have not been needed if some degree of mutual alienation and therefore conflict did not exist. If, as President Carter claimed, these names were simply occupational designators, there would have been some Hutus in positions of authority and power in pre-colonial times. Finally, the latest killings were on the basis of ethnicity and not land ownership. If the conflict was truly about land, landless peasants would have been killing landlords regardless of ascriptive identity. As with Uganda, the Nile played no role in these disputes, except as the carrier of the victims' bodies

CONFLICT IN THE NILE

Virtually every war in the Nile basin concerned identity issues such as religion, language, or even territorial nationalism (in Eritrea's case). The only country to go to war for the traditional reasons of acquiring land, population, and tax revenues has been Egypt. Out of the economic and strategic expansion policies of Mohammed Ali and his heirs

came an Egyptian mind-set that sees the Sudan as Egypt's backyard and the Nile as Egypt's water. These Egyptian attitudes are resented by Ethiopia and the East African states and cherished by the Sudan. Egyptian analysts ignore the domestic causes of the Sudan's problems and blame Israel for supporting the Southern Sudanese. Implicitly, the Egyptians are essentially saying that the Southern Sudanese have no right to seek allies and friends in their struggle to defend their traditions, languages, religions and basic human rights. In other words, Egyptian hydrologists are saying the Southern Sudanese ought simply accept the Arabic language and Islam in order to secure what they believe to be Egypt's interests there. Yet, there is little hydrological basis for maintaining the current dam network on the Nile. The Egyptian hydrological community, can be described as a scholarly community concerned that a power may rise in the Upper Nile or in Ethiopia and demand a share in the Nile's water or "threaten" Egypt's water supplies. As argued earlier, upstream storage could easily save enough on seepage and evaporation at Aswan to cover Ethiopian, Eritrean or East African water allocations without jeopardizing a reasonable, negotiated share for Egypt that would approach current levels of use, if not exceed them.

Egypt probably regards the Sudanese-Ethiopian dispute as beneficial because it prevents these two states from cooperating. But it is Egypt that has been the greatest loser, because it would have stood to benefit immensely from Ethiopian and Sudanese upstream storage and soil conservation programs. Egypt values control more than it values water. It seems to fear having neighbors that can negotiate in earnest. It can cooperate with the Sudan, because of the Northern Sudan's cultural dependence on Egypt, especially in terms of religious education and access to the Middle East. The Sudan (or

at least its Arab leadership) is also the only other Nile state whose rulers speak Arabic and whose official religion is Islam. Its focus is on Egypt, and its national self-image is deeply attached to the Nile as a sort of link to Arabian peninsula. Despite severe conflicts of interests, these two states have generally cooperated over the Nile and have avoided war in modern times. The Sudanese Mahdist invasion of Egypt followed the pattern established for other times and places within the basin; the Mahdists were invading Egypt to meet what they believed to be the requirements of their faith and identity. The Mahdist wars have left their mark on Sudan, Ethiopia, and even Uganda. Yohannes IV is lionized in Ethiopian songs, and the Mahdists' battles against the Ethiopians, the British and the Egyptians are still celebrated in the Sudan. In Uganda, the Mahdist state cut off Egypt's Equatorial province with a German Muslim, Amin *Pasha*, at its helm. Amin *Pasha's* troops formed the basis for the first British units in Uganda and settled in the West Nile Province as "Nubians." Uganda, with its already diverse population, was thus given a new ethnicity to include in its political game. The Mahdist era also made cooperation between Ethiopia and the Sudan more difficult, and has led the Ethiopians and the Sudanese to define each other as "the other."

IDENTITY

EGYPT

Egypt styles itself an "Arab" state, despite its long non-Arab past. Islam is the official faith of the state. But many Egyptian Islamic fundamentalists would like to make Egypt even more Islamic. They have lashed out against Egypt's Coptic community and have treated it as an internal "other." The Copts (10-15% of Egypt's population) were

among the first to feel the brunt of Islamic fundamentalism. In June 1981, militant Copts clashed with radical Muslim fundamentalists in a poor Cairo suburb. The Muslim Brotherhood's *Al-Da'wa* accused the Copts of insulting Islam and gathering arms to kill Muslims. In September 1981, Sadat ordered 3,000 people jailed. Most of these political prisoners were Muslim fundamentalists. For the sake of balance, Sadat also ordered leading Copts, including Pope Shenouda III, locked up. But the genie of fundamentalist anger did not stop with the Copts, it reached Sadat himself. It burst on the world stage on 6 October 1981, on the eighth anniversary of Egypt's "victory" on the Suez canal in the 1973 Yom Kippur war. Lt. Khalid al-Islambuli and four other members of the *al-Jihad* organization were convicted of regicide and executed.¹³² Since Sadat's death, various Islamic fundamentalist groups have used terror to undermine the Egyptian government, often with the Sudanese National Islamic Front government's support. Disputes over the role of Islam in the polity lies at the core of the struggle over the national identity of Egypt, and the Copts have not been the only "others" in the discourse of those who wish to establish Egypt as an Islamic state. Americans, Jews and Westerners are also labeled as evil. For example, *al-Da'wah*, the Muslim Brotherhood's newspaper, wrote:

The United States is the leader of the international crusade of neo-colonialism. The Muslim World in general and the Arab region in particular are considered prime targets for American designs because of their energy resources, strategic location, and tremendous markets. The United States would not permit competition from any rival in its quest to monopolize the pillage of Islamic wealth. It may allow others a small

¹³²Barry Rubin, *Islamic Fundamentalism in Egyptian Politics* (New York: St. Martin's Press, 1990), pp. 16-18, 41-92, 98-102; Stanley Reed, "The Battle for Egypt," *Foreign Affairs*, Vol. 72, No. 4 (September-October 1993); Hrair R. Dekmejian, *Islam in Revolution: Fundamentalism in the Arab World* (Syracuse, N.Y.: Syracuse University Press, 1985), pp. 89.

share so long as they enhance the strategic objectives of the American crusade against Islam and Muslims ... The United States implements its scheme through both its own CIA and client Muslim rulers who sold out their religion, country, nation, and honor. The price for selling out is for these client rulers to stay in the seats of power ... They have been instruments for the American Zionist designs to consolidate Israeli aggression in Palestine. The latest chapter of this American game is to frighten is to concoct a false peace between the Arabs and the Jews. The American intention is to get the Arabs to shift away from Israel to a hostility toward the Soviets. True they are all enemies ... But to frighten Arab rulers by an impending Soviet threat is only a trick to make them accept a false peace with the Jews, the arch-enemies of God, his Prophet, and the faithful. How naive our rulers would be if they swallow the bait.¹³³

The historic Coptic nature of Ethiopia makes the country, in some respects, Egypt's primary "other" -- at least for those who see Egypt as a Muslim country. But the perception of Ethiopia as an "other" is not limited to Egyptian Islamic fundamentalists. In previous sections, we saw how the Khedive Ismail of Egypt regarded Yohannes IV as inferior to Egyptian Coptic bishops. Sadat's threats to Ethiopia also assume a certain degree of Egyptian supremacy with regard to Ethiopians. Furthermore, the fundamentalists' hostility to the Copts is not limited necessarily to Egypt's borders, because they do not recognize the legitimacy of borders. Instead, Islamic Fundamentalists recognize barriers between people on the basis of religion. The fundamentalist challenge to the Egyptian state threatens the established national identity of the country. Under Nasser and Sadat, Egypt became the core of the Arab world. World War I was "the midwife of Arab nationalism," and Egypt was influenced by the sentiments that fed the Arab Revolt. These sentiments found fertile ground in Egypt's

¹³³*Al-Da'wah* as cited by Saad Eddin Ibrahim, "An Islamic Alternative in Egypt," *Arab Studies Quarterly*, Vol. 4, No. 1 (Spring 1982), p. 89; Ibrahim was cited by Rubin, *Islamic Fundamentalism*, pp. 101-102.

educated elites who looked back at Egypt's pre-Ottoman Arab and Islamic period and resented Britain's informal control over the country through its Consul-General Lord Cromer—who functioned as Egypt's *de facto* governor. In addition, European nationalism was also influencing these very same educated classes. Consequently, Egypt's 1956 republican constitution declared that the country is "a part of the Arab nation." In theory, Arab nationalism includes everyone who speaks Arabic in the national community, regardless of religious beliefs and other cultural or racial factors.¹³⁴

This secular definition of national identity offends Egyptian Islamic fundamentalists, because they seek to exclude the Copts and any other non-Muslims from the national community and the polity. They seek to define membership in the political community by religion alone, but, they face a very difficult task. Unlike other countries in the basin, Egypt also enjoys a strong sense of community created by the Nile itself. Its shores constitute the vast majority of habitable land in Egypt. In Egypt, people are forced to live in a single well-defined space--the Nile valley; and egged on by a powerful local common culture, Syrians, native Fallahin, Greeks, Bedouin Arabs, Albanians, Nubians, Berbers, Turks, Tuareg, Italians, Armenians, Chechens, Cherkess and Gypsies have had no choice but to emphasize their commonalities or "Egyptian-ness" in order to coexist. As a result, assimilation (or at least a very high degree of integration) into mainstream life becomes inevitable. Given the reality created by the Nile, most Egyptian Muslims recognize the Copts as their fellow Egyptians, even if they wish to see Islam further emphasized as the state faith or feel that Coptic Christianity is an inferior or false

¹³⁴William Polk, *The Arab World Today* (Cambridge, Mass.: Harvard University Press, 1991), pp. 136-143, 206-207, 301-302.

religion. In short, the Islamic fundamentalist attempt to undermine the Nile-derived sense of national identity by dividing Egypt into a dominant Muslim society and a subservient Coptic underclass faces a very strong social barrier stemming from the social consequences of the Nile's geography. So, the Islamic fundamentalists resort to terror.¹³⁵

Sadat's emphasis on the Nile, at least in terms of creating an Egyptian national identity, was and remains accurate. Unfortunately, Egypt's concern with the Nile finds its highest expression in the "Fashoda complex." This "complex" induces Egypt to seek a very high degree of control over the river and fears the appearance of powerful states or entities upstream. John Waterbury, a political economist and a student of the Middle East, coined the term. It essentially refers to an Egyptian fear that an unstable upstream crisis would affect the flow of water to Egypt. Egypt fears an independent state in Southern Sudan and is attempting to solve the Sudanese civil war diplomatically without taking sides, despite the Sudanese government's support for terrorists in Egypt. This concern about the situation upstream leads Egypt to regard every upstream water project it does not control (or influence) as a threat. It also prevents Egypt from cooperating with Ethiopia on upstream storage programs. The power of the Fashoda complex is derived from its close association with the most vital component of Egypt's national identity -- the Nile itself. Without the Nile, Egyptians would be sharply divided along the lines of religion, dialect and ethnicity that have been submerged in the river's mud and water.¹³⁶

¹³⁵Farouk Mustafa, Professor, Center for Middle Eastern Studies, The University of Chicago, Summer 1995; Norman Cohn, *Cosmos, Chaos and the World to Come: The Ancient Roots of Apocalyptic Faith* (New Haven, Conn.: Yale University Press, 1993), pp. 3-31.

¹³⁶Kliot, *Water Resources and Conflict*, p. 88; Naff and Matson, *Water in the Middle East*, pp. 143; Stephen Peter Rosen, "Military Effectiveness: Why Society

The importance of the Nile in terms of the Egyptian national identity and its associated Fashoda complex are of cardinal importance in terms of understanding the true dynamics behind the political decision to build the dam. The Aswan High Dam was really built to cope with the Fashoda complex, not to provide power and water. Despite John Waterbury's arguments, it was not built for geopolitical purposes, because it puts Egypt's very survival into question. The Aswan High Dam is slowly destroying Egypt's most productive land--the delta. The lack of replacing sediment has allowed the sea to expand and poison the land in the triangular delta. The 22,000 square kilometers constituting the delta are crucial for Egypt's agriculture and economy, but the sea is expanding at an annual rate of 100 meters inland along certain sectors of the shoreline.¹³⁷ John Foster Dulles, the late former United States Secretary of State, was correct about the dam, but this has become obvious only recently. In short, the Fashoda complex, through the mechanism of the dam, is slowly killing Egypt.

THE SUDAN

The Nile divides the Sudanese as much as it unites the Egyptians. The Southern Sudan's borderlands with the North lie immediately North of two of the White Nile's tributaries -- the Bahr al-Ghazal and Sobat rivers. Worse still, the Sudan is also suffering from a bloody debate over the national identity of the country. There are two sides to the issue of national identity in the Sudan. Each perspective contains a definition of the

Matters," *International Security*, Vol. 19, No. 4 (Spring 1995), p. 19; Yehoshafat Harkabi, "Basic Factors in the Arab Collapse During the Six Day War," *Orbis*, Vol. 11, No. 3 (Fall 1967), pp. 677-91.

¹³⁷Laura Jean Penvenne, "Disappearing Delta," *American Scientist*, Vol. 84 No. 5 (September-October 1996), pp. 439-440; Charlene Crabb, "The Mud That Was Egypt," *Discover*, Vol. 15, (January 1994), p. 1.

national identity of the Sudan, "others," and crucial formative historical memories that have caused the war in the Sudan. It is important to emphasize that the second Sudanese civil war has evolved into a clash of two visions of the Sudan's national identity rather than a simple war between the North and the South; nevertheless, it is still useful to talk about a "North" and a "South," because the NIF government draws most of its support from Northern Arab Muslim communities, while the National Democratic Alliance's military backbone remains the predominantly Southern SPLA.

THE NATIONAL ISLAMIC FRONT VISION

For many in the North, the Sudan is a profoundly Muslim country whose government must reflect Islamic values and laws. The roots of this view of the country are very old. The Sudan received its first Christian Ottoman governor, Arakel *Bey* Nubar, in the late 1850s. A relative of Arakel *Bey* Nubar of Massawa, he had to face down a tribal revolt immediately after he assumed office. A powerful Arab Muslim tribe, the Skukriyya, almost revolted because they strongly objected to a non-Muslim governor. The governor was able to win the support of the tribe through a display of personal courage.¹³⁸ Courage did not, however, save Charles Gordon some thirty years later. For many in the North, the Sudan cannot be understood without Islam. Prof. Abd Al-Latif Al-Buni, a pro-NIF Sudanese political scientist, argues that Islam is the most essential component of the Sudanese national identity. He attacks missionaries and the Christian churches for preventing the "spread of Islam" in the South through the "establishment of an educated Christian class in the South with views incompatible to its sister class in the

¹³⁸Holt and Daly, *A History of the Sudan*, p. 72.

North." Al-Buni argues that the Islamization of the South is essential to insure the region's "national unification with the North." He further argues that "Southern political parties . . . resorted to Christianity only to give the South an identity distinct from that of the North."¹³⁹ For Al-Buni and many other Northern Sudanese, religion is the critical component of the Sudan's national identity. From their point of view, to be Sudanese is to be a Muslim. To be a Christian, a traditional religionist, a Jew or a Hindu is not to be Sudanese.

This vision of the Sudan's national identity is linked with a special outlook toward Egypt. After heaping praise on Abboud, Bashir, and Turabi for their respective Islamization policies, another pro-NIF academic outlines "the facts" about the Sudan:

1. The Sudan enjoys a strategic position known to the great powers. The great powers know the Sudan's political, military and economic value. Consequently, they deal with it in light of this understanding by various means. And at this point, we must say that the traditional colonialist ways do not suit this age or its discourse. Therefore, the language of interaction [with the Sudan] differs radically [from that used in the past], so that it would enter from the door of realizing national direct and indirect strategic interests to the path of economic pressure, the encouragement of internal problems, and threats to external security such as the ties and alliances created by the great powers with the Sudan's immediate neighbors.
2. There are attempts and efforts designed to end the Sudan's identity as a people composed of an Islamic majority and and attempt to reveal and declare a separation between the Arab and Islamic nature of the country and the regimes it had seen. And we must emphasize that the efforts to destroy the Sudanese people's national identity were a gamble in the hands of the countries greedily desiring proximity to the Sudan's strategic location; thus, the foreign policies of its neighbors (Egypt, Libya, and Ethiopia to be precise) must be and can only be watched and with the the context [of great power ambitions] in mind.

¹³⁹Abd al-Latif Al-Buni, *Nimeiri's Islamic Experiment in the Sudan* (Khartoun, Sudan: The Institute for Social Studies and Research, 1995), pp. 6-9. In Arabic.

3. The Sudan's Islamic direction is an original reality in the path of the Sudanese people since the entry of Omaru Ibn Al-As, may God be satisfied with him, into Egypt, conquering it and spreading Islam until the announcement of the Islamic Shar'ia in September 1983 AD. And at the head of the opposition against the Islamic direction stand world-wide crusader currents wearing the clothes of secularist thought and other anti-Islamic thought sects. This truth was revealed clearly in the period of struggle and frustration that immediately preceded and followed the fall of Nimeiri when the American-Israeli element was revealed without disguise.¹⁴⁰

Al-Sayir leaves no doubt about the "other" as far as he is concerned. The "other" is the Christian (both Western and Coptic), the Jew, the secular Westerner, anyone who points out the Sudan's religious and ethnic plurality and even Mubarak's quasi-secular Muslim government in Egypt. Despite Al-Sayir's condemnation, Egypt is central to the Muslim Arab Northern Sudanese version of the country's national identity because it is the source of the faith. Abboud was probably the first to realize that the post-independence hostility to Egyptian hegemony could not be sustained among the Arab and Islamic oriented elites in the North despite the Sudan's clear national interest in a Pan-Nile water management regime like the Nile Valley plan and a settlement with Ethiopia. He probably also understood that Nasser would use Egypt's religious appeal to further destabilize the Sudan. Abboud's primary failure was his inability to understand that attempting to Arabize and Islamize the South would lead to an intensification of the civil war and a tremendous blow to the Sudan's hopes of economic development. He miscalculated the true cost of capitulation to Nasser, because he believed in Islam's and Egypt's centrality to the Sudan's national identity. The 1959 Nile Waters Agreement became the symbol of the special relationship between Egypt and the Sudan, and

¹⁴⁰Habib Ahmed Al-Sayir, *The Sudan From Nimeiri to Bashir* (Khartoum, Sudan: Khartoum University Press, 1995), p. 15. In Arabic.

subsequent Umma Party and NUP/DUP governments could not remove it. In the Sudan, the Nile itself does not enjoy the position it enjoys in Egypt. For the Northern Sudanese, its importance lies in the fact that it is *the river that goes to Egypt*.

With regard to the civil war, Nimeiri tried achieve what Abboud could not, but he was only temporarily successful. Nimeiri's rule can be divided into two periods that correspond with changes in his character and personality. In the first period, Nimeiri was a secular man with tolerant religious and ethnic attitudes. True enough, he was the dictator who ordered the execution of coup plotters and banned political parties, but he did not attempt to impose his religious beliefs or culture on anyone. In short, he was capable of accepting cultural, albeit not political, pluralism. Sometime in the early 1980s, he entered into an alliance with the Sudanese Muslim Brotherhood, the forerunner of the NIF, to curb the influence of the banned Umma Party. In addition, he began to ponder his personal religious status. He found himself increasingly attached to his faith, and his secularism waned.¹⁴¹ One afternoon in the early eighties, Nimeiri appeared on television at the home of a rather religious but moderate Muslim Sudanese singer (Salah Ibn al-Badia) and claimed that the prophet ordered him to followed "the straight line of Islam" in a dream. Sudanese secularists were shocked, and many non-Muslims living in the North began to make plans for departure. In September 1983, he imposed Islamic law and began traveling the path blazed earlier by Abboud with the same catastrophic results for the country.

THE SPLA VISION

¹⁴¹Deng, *War of Visions*, p. 12.

For the SPLA's forerunners, the *Anya Nya* I and II, the Sudan was an illegitimate state that needed to be broken into two. The SPLA and its Northern allies, on the other hand, have adopted a vision for a united "New Sudan." Garang and his supporters reject the debate over the Sudan's Arab versus African identity. They prefer to regard the country as a territorial entity whose inhabitants have rights and responsibilities on the basis of political citizenship rather than religion -- "Sudanism" instead of "Islamism/Arabism" or "Africanism." This vision is premised on the equal legitimacy of Islam, Christianity and traditional religions within the country's national identity. The SPLA regards Senegal and Tanzania as models for its approach to religion. Tanzania, with its Christian plurality, has had Muslim presidents and Senegal, with its overwhelming Muslim majority, was led by a Catholic for decades. Garang de Mabior argues that the New Sudan would have the same degree of tolerance and comfort with religious issues. In order to accomplish this goal, the SPLA calls for the separation of Church, Mosque and State. The SPLA and its allies also call for the establishment of a federal, decentralized state in the Sudan to account for the size and diversity of the country.¹⁴²

The SPLA is willing to accept the Arabic language as the official language of the Sudan, but it insists that its acceptance of the language does not entail an acceptance of an exclusively Arab identity for the Sudan. At the Koka Dam Conference in 1986, Garang de Mabior stated the South's position with regard to the Arabic language and culture:

¹⁴²Garang de Mabior, *The Call*, pp. 118-141, 204, 209-210, 213, 215, 216-220, 251-254, 257-261

Taha al-Noumahn, a journalist, quotes John Garang, the leader of the SPLM-SPLA, as having endorsed Arabic as the national language of the Sudan. Mansour Khalid also reports that Garang said in his address to the Koka Dam meeting in March 1986 that Arab culture "is our culture and Arabic is our language, and they are here to stay." Paraphrasing Garang, [Mansour] Khalid added, "It is the racially biased hegemony that is to go." In his address to the Koka Dam Conference, Garang spoke on the issue of languages: "We are a product of historical development. Arabic (though I am poor in it -- I should learn it fast) must be the national language in a new Sudan and therefore we must learn it. Arabic cannot be said to be the language of the Arabs. English is the language of the Americans, but that country is America, not England. Spanish is the language of Argentina, Bolivia, Cuba and they are those countries, not Spain. Therefore, I take Arabic on scientific grounds as the language of the Sudan."¹⁴³

From the Southern perspective, the "other" is the Northerner who tries to impose his faith on an unwilling South. For the South and some of its allies, the ultimate "other" is the historic and modern Arab slave raider/trader and the Northern soldier with his "bearded" Bren guns. The wars have led to songs about the "other," with the Dinka lodging a complaint with God about the treatment they receive from the Arabs:

Our land is closed in a prison cell
 The Arabs have spoiled our land
 Spoiled our land with breasted guns
 Is the black color of skin such a bad thing
 That the government should draw its guns?
 The police pacing up and down,
 Gunners causing dust to rise,
 Cowards surrendering to the arms? . . .
 South of Deng, son of Kwol,
 What is the Government doing
 Is not a good thing;
 Waving their bren-guns
 Counting their [empty] shells
 Then saying, "One million shots
 Have not subdued the Ngok [Dinka]."
 Our case is in the Court with the people above
 The Court is convened between the clouds . . .

¹⁴³Deng, *War of Visions*, pp. 450-451.

[Our ancestral spirits] have a cause
 They seated the Court
 And called God
 Then said, "God, why are you doing this?
 Don't you see what has become of the black skin."¹⁴⁴

According to Francis Deng, these two visions have become national identities.

Furthermore, he implicitly argues that the SPLA's positions represent a last ditch effort to maintain the unity of the Sudan. If the North continues to insist that the Sudan is Arab, despite its African heritage and continues to attempt to impose an Islamic Arab identity on the South the only solution left for the Sudan would be partition. The role of the Nile in the formation of the national identity espoused by the South akin to the river's role in Egypt--the SPLA's flag includes a milky grey color symbolizing its life-giving waters. The Sudanese government's flag, in contrast, is composed of the four pan-Arab colors: green, red, white and black -- the colors of the prophet's first four heirs and the divisional colors of the four nominal Mahdist *Khalifas*.¹⁴⁵

ETHIOPIA

One of the Mahdists' greatest mistakes was the foolhardy attempt to invade Ethiopia. The country was and largely remains a Coptic-dominated state. Today, two of its three leading regional states are overwhelmingly Coptic (Tigray and Amhara) and the population of the third dominant state (Oromia) is split evenly between Christians and Muslims. Of the remaining six states only three impoverished and underpopulated states enjoy Muslim majorities (Harar, Ethiopian Somalia, and the Afar Regional State). The

¹⁴⁴Ibid.

¹⁴⁵Ibid., pp. 228, 434-435.

remaining three states are either of mixed Christian-Muslim population or of animist preference. In addition, the Ethiopia of Yohannes' days saw itself as a country under siege by Muslim powers. In a letter to Kaiser Wilhelm, dated 17 February 1881, Yohannes complains bitterly of the encroachments on Ethiopia by the "Grag" (the Muslims who invaded Ethiopia in the 1500s) and the "Turks" (Egyptians) who "ambushed and killed [his] emissaries . . . they also Islamize the Christian population." Yohannes asks for the Kaiser to second personnel into the Ethiopian service.¹⁴⁶ While Yohannes' vision certainly included Ethiopia's Muslims, it still viewed Islam as the other; this perspective is easily understood when Egypt's incursions and wars are taken into account. Ethiopia, although multiethnic, is not a country created by colonial fiat like its neighbors. Except for a short period under Italian rule, the country remained independent for centuries. Unlike the Mahdists, it was able to repel European colonial empires repeatedly and preserve its independence. Its dogged resistance to colonial encroachment served as a model for other regions in Africa. Today most African states use the colors of the Ethiopian flag -- itself rooted in the rituals of the Coptic church.

GREAT LAKES STATES

The three states in former British East Africa have had a mixed record in coping with issues of identity. Tanzania organized itself around the socialist ideology of ujumma -- togetherness or union in Swahili. The armed forces of Tanzania are drawn from organizations affiliated with the country's ruling party. The country has adopted a secular orientation and has been able to maintain peace between its Christian, Muslim and

¹⁵¹Yohannes IV, *Negus* of Ethiopia, "Letter to Kaiser Wilhelm I," 17 February 1881; the whole text of the letter is included by Gabre-Sellassie in *Yohannes IV*, appendix A, pp. 258-259.

Animist communities. Predominantly Muslim Zanzibar enjoys autonomy and its president is Tanzania's vice-president. Like Tanzania, Kenya can be said to have successfully dealt with its identity issues. There have been occasional outbursts of Somali separatism in eastern Kenya, but these movements have slowly died down. Kenya's government is led by the Kikuyu, the country's largest tribe. The Kikuyu's homeland includes the capital city of Nairobi. While Kikuyu dominance is a source of some friction in the country, Kenya's internal differences never erupted into inter-ethnic armed conflict among non-Somali groups. During the early 80s, the Air Force attempted a coup, but failed miserably. It was reorganized as a part of the army. Kenya's and Tanzania's relative successes in containing the genie of ethnic and tribal separatism contrast sharply with Uganda's tragic history.

Like the Sudan, Uganda is an artificial state whose borders do not reflect coherent cultural, geographic or economic realities. Unlike Tanzania and Kenya, it developed plenty of "others." The enemies of the Ugandan state, more specifically the enemies of Amin and Obote, have been Uganda's own people -- especially those whose tribal affiliation was out of the ruler's favor. The current Ugandan government is clearly attempting a Kenyan approach to the problem by concentrating power in the numerically powerful Southern Bantu tribes like the Buganda, while including cooperative Acholi, Langi and West Nile factions in the governance of the country. With the current regime, Uganda has begun to define the other in terms of foreign states and powers. Museveni is an open enemy of the Sudanese and Congolese governments and is a supporter of insurgencies in both countries. Uganda bans political parties because Museveni fears that they will become vehicles for tribalism. Renewed tribalism would restore Amin's legacy

and would prevent the building of a territorial identity that includes all tribes and religions. Rwanda and Burundi face a similar challenge. The Tutsi governments of both countries face Hutu insurgencies and the issue of either country's national identity is not settled.

CONCLUSION

The Nile teaches us a great deal about the role, relevance and identity of the state. Throughout the basin, the classical Weberian definition of the state, i.e., the sole institution in society with corporeal capability and legitimacy, does not apply. Non-state actors like rebel movements, such as the SPLA, EPLF, Islamic Jihad and the LRA, not only brandish weapons, but also control territory, tax and even enjoy a large degree of legitimacy within the territories of the states they fight. The utility of the state as the object of analysis is greatly reduced as a result of the rise of the said non-state actors. All of these groups are organized along lines defined primarily by identity.

Identity also serves as the cause motivating all of these groups. The aim is either to alter the identity of the state or set up a new state dedicated to an alternative identity. The state has slowly become an instrument for promoting the identity of its dominant group. Consequently, it has been reduced to an object. It is becoming less and less of an independent actor in International Relations. In the Nile basin, the state is effectively not an actor but a tool brandished by sub-state actors to promote their identity-related perspectives both domestically and across international borders. As one ascends the Nile, the presence of a unified national identity diminishes. The states of former British East Africa and the Sudan have not completed the task of creating a single national identity.

Ethiopia, while more successful, has not yet managed to accomplish the degree of internal unity achieved by Egypt. Despite its success, Egypt continues to suffer from Islamic Fundamentalism and discrimination against the Copts. Aside from serving as an indicator of loyalty in Nile basin conflict, identity is also the object of conflict. The war in the Sudan is ultimately about the relationship between the country's Arab/Islamic and African components.

The case study also questions the possibility of coding variables that evaluate power. While a state may enjoy immense advantages in military, economic and technological power, these factors may not be relevant on the battlefield. And, the battlefield may not be the decisive factor in a conflict. Egypt was defeated by Ethiopia in 1870s despite its overwhelming military, economic and technological superiority. Thomas Naff's table, shown in the literature review, leaves out many important and relevant variables such as distance, willingness to fight and the ability to withstand heavy battle deaths. War and conflict seem to have caused water disputes in the Nile basin, and issues of identity were the most important causes for war and conflict. Egypt and the Sudan did not quarrel over water in 1958, the root of the quarrel was Egypt's Fashoda complex which had become a part of Egypt's national identity matrix.

The Nile case study shows that things do not cause war, people do. Oil, water, land, wealth, the balance of power and the international system have all been cited as causes of war. Environmental degradation also joined this list recently. The Nile case study suggests that these causes of war need to be questioned. The conflicts between and within the states of the Nile basin are largely conflicts of identity. Egypt's 19th century policy of imperial conquest was the only exception to this pattern. At any rate, securing

Egypt's water supplies was not a goal of the policy, and identity-related variables informed Egypt's invasions of the Sudan and Ethiopia. The perspective that argues that water disputes are not a causes of conflict seems to be much better supported by the Nile case study.

The argument, discussed in the literature review, that water disputes are a function of political conflict is a much more accurate account of the relationship between water disputes and conflict than alternatives offered by Naff and others that posit that water disputes cause war. Cooperation in the Nile basin followed "civilizational" lines. Egypt is most willing to cooperate with the Sudan, a country with whose leadership it shares a dominant faith and a dominant language. Of course, this is at least a partial confirmation of Huntington's thesis of the "clash of civilizations."

The Sudan has consistently acted against its best hydrological interests in order to promote its relationship with Egypt, which is seen by its Northern leadership as the core of the Sudan's being or *raison d'etre*. Egypt and the Sudan have not been as uncooperative with the former British East African states as they are with Ethiopia. It is important in this instance to remember that all five states have hydrologists that are at least partially British-English speaking, having attended either British universities or British-pattern educational institutions in their respective states. Ethiopia does not possess such an elite. Ethiopian hydrology, such as it is, is largely a product of U.S. and Soviet educational systems. *This study strongly suggests that conflict in international water basins is not necessarily caused by disputes over water.*

CHAPTER IV

THE TIGRIS-EUPHRATES CASE STUDY

Like the Nile, the Tigris-Euphrates basin has been a cradle of civilization. Its history until 1914 seemed secure. The Sunni Ottoman Empire of Turkey and the Shiite Safavid Empire of Iran had settled their frontier zones with the Kharun River and a few of the Tigris' tributaries remaining with Iran. The last serious challenge to Ottoman control of the basin was the Egyptian invasion of Syria and Ottoman Anatolia by the independence and modernization-minded Ottoman governor of Egypt, Muhammad Ali in the 19th century. With the eruption of World War I, the picture changed dramatically. The war finalized the destruction of the Ottoman order and led ultimately to the establishment of a Kemalist state in Turkey. Kemalism is an unusual form of nationalism. Whereas in other nationalisms, the state is created through an appeal to some elements of cultural commonality, Kemalism seeks to have the state impose commonality. Consequently, groups that do not conform must either be assimilated or marginalized demographically. World War I also altered Turkish views of the Arabs. Turkey had to share the Tigris-Euphrates basin with two new states, and instead of being the prophet's people, Arabs became, for many Turks, traitors. The last Ottoman ruler of Syria did a great deal to harm the reputation of Turkey in the Arab world through deportations, massacres and callous agricultural policies resulting in starvation. The well of friendly, neighborly relations between Syria and Turkey was poisoned long before it was dug.

Turkey is currently attempting to "solve the Kurdish problem," by economically integrating the Kurds into Turkey through the Southeast Anatolia Program (GAP in Turkish). The policy also has the not co-incidental side-effect of depriving Syria of water by greatly reducing the flow the Euphrates into that country. Turkey's motives in both instances are intimately tied with its nationalities policy. Turkey precluded any attempts to divide the water on the basis that "it is Turkish water." The country's refusal to negotiate with Syria is rooted in its rejection of the outcome of World War I, especially with regard to the Arab role in that war. The Turks' attitudes towards Arabs are so profoundly negative that cooperation is very unlikely. Furthermore, Syria was left with no choice other than using the Kurds against Turkey in order to induce cooperative behavior in Ankara. Syria itself is extremely about Turkey and shares some views with Greece and Armenia regarding that country. So, it cannot, at this time, negotiate with Turkey in good faith. Faith, in the sense of religion, drives Syria's relations with Iraq.

Both Syria and Iraq are Ba'athist states ruled by relatively small minority groups (10-15 percent) but the similarity ends there. Iraq has moved beyond authoritarianism and can be rightly regarded as a totalitarian state. Its army and bureaucracy are of Ottoman origin, dominated by Sunni Arabs. The precarious demographic position of Sunni Arabs in Iraq and their exclusion of effective representation of other groups in the center of power forces the regime to treat the vast majority of its population with utter brutality. The religious, political and ethnic differences between Iran and Iraq fed the potential for war. The war became inevitable when Iraq perceived, wrongly as it turned out, that Iran was not going to be able to resist effectively because of its ongoing revolution. Iraq's behavior suggests that the country's leadership does not view its

Kurdish, Iranian, and Shiite Arab opponents in human terms. Iraq did not begin the war with Iran because of the Kharun, an Iranian river that flows into Iraq, or the Iranian Tigris tributaries. It began the war for oil and for reasons related to its own lack of national identity. Its quarrel with Syria begins to make sense only when the nature of the current leadership in Syria is taken into account. Syria is led by its Alawite community, a sect long scorned in the Islamic world. As the GAP dams were built, Iraq consistently blamed Syria rather than Turkey for its water shortages. Iran has not engaged in disputes over water issues, and its internal nationalities policy seems to be very balanced. Its only serious ethnic conflict has been with the Kurds, and other ethnic groups, especially Azeri-speakers, seem to be integrating into the mainstream of Iranian life without any state compulsion to do so.

Much of the region's instability stems from the lack of a Kurdish state and the Kurds' desire to be left alone if not allowed to be free. The only major conflict with a clear nexus to water, the confrontation between Syria and Turkey, is really about historic mistrust and a clash of identities. This clash is fed by the view of the Arabs as an other in Turkey and the inevitable demonization of Turkey and Turks in Syria in the aftermath of World War I. Conflict caused by an apparent dispute over water turns out to be a conflict caused by a clash of Turkish and Arab national identities. The dispute over water feeds and exacerbates a pre-existing conflict, but does not cause it. The Tigris-Euphrates basin has witnessed many such conflicts in the past and undoubtedly, these past conflicts have made problem-solving in the region very difficult.

This case study, organized in the same manner as the Nile case study, presents us with a much grimmer picture than the Nile. There is no cooperation whatsoever here. At

least, in the Nile Basin, Egypt and the Sudan cooperate and the Central African Great Lakes states attempt to cooperate as much as possible. The Tigris-Euphrates basin, on the other hand, is reminiscent of the Islamic portrayal of the *Jahiliya* -- the Hobbesian state of nature that existed in the Arabian peninsula before Islam. More than a million people have died in wars in the basin since 1918, and there is no sign that the chaos is ever going to end. It is as if the Tigris-Euphrates basin is a cursed plot of enchanted land.

NATURAL HYDROLOGY

The Tigris-Euphrates basin has not been studied as well as the Nile basin. As a result, there is a substantial variance in reported annual mean discharges of both rivers. For the purposes of this dissertation, figures used by Nurit Kliot and the team of Kolars and Mitchell will be accepted as authoritative in order to provide the study with a maximum degree of consistency.¹ From a purely hydrological point of view, the Tigris and Euphrates basins are joined only at the Shatt al-Arab waterway in Iraq. Nevertheless, they can be treated as a single basin, because three of the four major co-riparians have a share in both basins. Iran has a share only in the Tigris River, but it contributes a great deal of water to the river and to the Shatt al-Arab waterway, and cannot be ignored in this study. The Euphrates drains 66,000 square kilometers in Saudi Arabia but the Saudi contribution to the river is nil. And while Saudi Arabia controls various wadis (dry creeks) that discharge into the Euphrates during storms, it can be excluded from this case study. Like Saudi Arabia, Armenia can also be excluded from this case study, because

¹Kliot, *Water Resources and Conflict*, pp. 108-109; Kolars and Mitchell, *The Euphrates River*, pp. 85-105.

while some Tigris waters originate in Armenia, the country's contribution to the system is likely to be minimal. Furthermore, the Armenian contribution to the river would travel through Iran and Turkey to reach the river, thus raising the risk of counting the water twice, so it would be prudent to exclude the country from this case study. In this section, the case study will examine the water contributions of each of the four major co-riparians: Turkey, Syria, Iraq and Iran.

TURKEY

Most of the water in the Tigris-Euphrates basin originates in territories controlled by Turkey. Turkey controls 125,000 square kilometers of the Euphrates' catchment area of 444,000 square kilometers. For comparison, the State of Maryland is about 33,000 square kilometers. In addition, the country controls 1,230 kilometers of the river's 3,000 kilometer main channel. Of the river's total annual average discharge of 28.2-30.5 cubic kilometers, Turkey contributes 26.5-28.5 cubic kilometers.² The Euphrates proper begins at Kharput at the confluence of the Kara-Su (Black River) and the Murat-Su (Wish or Spirit River). Kharput is located 400 kilometers west of Lake Van. After Kharput, the Euphrates flows into a valley, and it cut across the Taurus mountains to the Syrian border. The Euphrates crosses into Syria at Jerablus, where its elevation begins to drop 2 meters every kilometer.³ The two major tributaries of the Euphrates, the Balikh and the Khandur rise in Syria and contribute 1.7-2.0 cubic kilometers of water. Mamdouh Shahin, a leading Egyptian hydrologist, and the U.S. Corps of Engineers regard Syria as

²Peter Beaumont, "The Euphrates River -- An International Problem of Water Resources Development," *Environment Conservation (Lussane)*, Vol. 5 (Spring 1978), pp. 37-38; Kliot, *Water Resources and Conflict*, pp. 112.

³Kolars and Mitchell, *The Euphrates River*, p. 4.

the source of both of these tributaries. Kolars and Mitchell, however, regard Turkish controlled territories to be the source of these tributaries. In this debate, they are supported by Kliot who argues that the two lesser rivers are "almost certainly fed by Turkish springs." Mitchell and Kolars implicitly acknowledge that they are in a debate over the sources of the river when they state that they are "presenting evidence" about the Turkish origins of the two rivers. Furthermore, these two analysts are clear about their reasons for disputing the Syrian sources of these two rivers. "The Khabur is cited as Syria's significant contribution to the discharge of the Euphrates and offers a *quid pro quo* basis for Syrian claims to use of the river." Frankly put, Kolars and Mitchell reject non-Turkish or non-Turkish approved use of the river on the basis of Turkey's immense contribution to its annual discharge. While the normative views held by Kolars and Mitchell may have merit, they cannot guide a physical description of the sources of the water. Kliot is more cautious and does not accept Mitchell's and Kolars' case outright, perhaps because she accepts the Helsinki rules as a basis for sharing international river systems.⁴

Like the Euphrates, the Tigris River draws most of its water from Turkey. Its tributaries are shared by Turkey, Iraq and Iran. It rises near Diyarbakir in Southeastern Turkey, flows eastwards and links up with the Batman-Su (Batman is a town in Southeastern Turkey). After a short 100-kilometer span within Turkish territory, the united Tigris flows into Syria. Syria controls only 44 kilometers of the river's main

⁴Kolars and Mitchell, *The Euphrates River*, p. 167; Kliot, *Water Resources and Conflict*, p. 115; U.S. Army Corps of Engineers, *Water in the Sand* (Washington, D.C.: U.S. Army, 1991); Mamdouh Shahin, "Review and Assessment of Water Resources in the Arab Region," *Water International*, Vol.14 (1989), p. 213.

channel. Turkey contributes 21 cubic kilometers of water to the main Tigris river, which amounts to 100 percent of its discharge. Turkey also controls 45,000 square kilometers of the river's 375,000 square kilometer drainage basin and 400 kilometers of its 1,862 kilometer long main channel.. With regard to the tributaries, however, a different and more complicated picture emerges. Unlike the Euphrates, the Tigris tributaries contribute 26.7-29.4 cubic kilometers to the river. The river is also infamous for its floods, irregularity, and rapid flow. It is similar, in some respects, to the Blue Nile. Turkey shares in the Tigris' Greater Zab tributary. It controls 6000 square kilometers of the tributary's 26,000 square kilometer basin and 22 kilometers of its 800- kilometer long main channel. The Zab adds 10-13.5 cubic kilometers of water to the Tigris' 21 cubic kilometers, and 7-10.5 cubic kilometers of this water originates in Turkey. The remaining water comes from Iraq. Turkey easily contributes 70 percent of the water in the system. The Tigris' remaining tributaries originate in Iran and Iraq.⁵

SYRIA

Syria's contribution to the Euphrates and the Tigris system is minimal. As discussed earlier, it is clear that Syria contributes a disputed amount of water to the Khabour and the Balikh. Syria controls 27,900 square kilometers of the Khabour's 36,900 square kilometer basin and 460 kilometers of its 730 kilometer-long network of streams and creeks (Turkey controls the balance of both). Of the Balikh's network of channels and streams, Syria controls 10,400 square kilometers of the Balikh's 14,400 square kilometer basin and 105 kilometers of the small river's channell network (Turkey

⁵Kolars and Mitchell, *The Euphrates River*, p. 6; Kliot, *Water Resources and Conflict*, p. 112.

controls the remaining portion of the basin and a 100 kilometers of the river's streams). Syria makes no discernable contribution to the Tigris. At most, Syria contributes about 1.7-2 cubic kilometers of water to the Euphrates through its main drainage area and its tributaries. Its share of the combined water discharge of the two rivers is about 2 percent.⁶

IRAQ

Unlike Syria, Iraq makes a substantial contribution to the total discharge of the two rivers, but its contribution is not as great as that of Turkey. Although Iraq controls 66,000 square kilometers of the Euphrates basin and 1,060 kilometers of its main channel, it does not contribute any measurable quantity of water to the river. It is in the Tigris basin that the country makes a water contribution. Despite containing 292,000 square kilometers of the main river's basin and 1,418 kilometers of its main channel, Iraq does not make a contribution to the Tigris' main channel. Its contribution is concentrated in the river's tributaries: the Greater Zab, the Lesser Zab, the Adhaim, and the Diyala. All of these rivers, except the Adhaim, are shared with other states; all told, Iraq contributes 8-9 percent of the river's water.

⁶Ibid.

Table 8: Iraqi Tigris Tributaries.

River	Partners (partner's water contribution in cubic kms)	Basin Share (sq. kilometers)	Length Share Kilometers	Iraqi Water Contribution cubic kms
Greater Zab	Turkey (7-10.5)	20,000/26,000	580/800	1-3
Lesser Zab	Iran (5.7-6.2)	18,900/21,500	280/350	1.0-1.5
Adhaim	none	13,000	200	0.8
Diyalah	Iran (4-5)	30,600/32,900	270/520	0-1.5

SOURCE: Klot, *Water Resources and Conflict*, p. 112.

IRAN

As table shows, Iran contributes about 9.7-11.2 cubic kilometers of water to the Tigris system. Iran's greatest contribution to the overall basin, however takes place after the Tigris and Euphrates unite to form the Shatt al-Arab waterway. The Kharun River, the longest in Iran, drains into the waterway bringing 20-24.8 cubic kilometers of water annually. The river drains 67,340 square kilometers controlled by Iran. Iran contributes at least 21 percent of the water in the Tigris-Euphrates-Shatt al-Arab system, making it the second most important source of water in the basin.⁷

WATER UTILIZATION

In antiquity, the Tigris-Euphrates basin's water development programs were predominantly Mesopotamian rather than Anatolian. In sharp contrast to the past, today's leading water development projects are upstream in Turkey. The Nahrawan canal was built in the 6th century AD, and it was used to transport water from the Tigris to the

⁸George C. Cressy, *Crossroads* (Chicago: J.P. Lippincott, 1960), p. 147.

Diyalah river for agriculture. The canal was 300 kilometers long and about 30 meters wide. The Nimrod dam, a 10-meter high, ancient marvel, diverted the water for the canal. The ancient canal was destroyed by the Mongols in the 12th century. Water and thirst have been used as a weapon in the region. King Nebuchnezzar used the canal system to defend Babylon, and Assyrians used floods as early but effective weapon of mass destruction. The catastrophic end of the Nahrawan canal symbolized the decline of agriculture in Mesopotamia. The Mongol conquest represented the failure of the local Islamic regimes in the Tigris-Euphrates to defend the territories and to raise the necessary revenue for maintaining armies and the canal system. The ostentatious life of the Abbasid *Khalifas*, such as Harun Al-Rashid, helped devastate their progeny and their immediate successors -- Iranic and Turkic dynasties such as the Buwayhids and the Kara-Quoyunlu. Modern Iraq has been able to use two ancient water projects, Lake Abu Dibbis and the Habbaniya barrage, to store water. These two ancient projects have a combined storage capacity of 46 cubic kilometers of water.⁸

TURKISH WATER DEVELOPMENT PROGRAMS

In sharp contrast to Iraq, Turkey's earliest surviving dams date from the seventeenth century. Turkey is blessed with levels of rain, and its agriculture did not need irrigation until recent times. Current water development projects date from the 1960s. The primary motivations for Turkey's projects in the Tigris-Euphrates basin have been

⁸Kliot, *Water Resources and Conflict*, pp. 116-117.

related to energy, economic development, and induced political and social change in an area characterized by the predominance of a rather unhappy minority.⁹

The first major Turkish water development program in the basin was the Upper Keban Dam. The dam is located near the city of Keban. While the dam was built strictly to provide electricity for Ankara and Istanbul, it does have a storage capacity of some 30 cubic kilometers. The United States' Hoover Dam, in comparison, stores 35 cubic kilometers of water. The dam is not considered a part of Turkey's ambitious Southeastern Anatolia Project (GAP in Turkish). Work on the Upper Keban Dam began in the 1960s and ended in 1974. The dam's reservoir began to fill that year, with catastrophic results. A drought hit the fertile crescent that year, and much acrimony broke out between Syria and Iraq over Euphrates waters. The Arab League and the Soviets were able to pressure Syria and Iraq to settle their dispute peacefully, but the problems did not end. The construction of a dam in Syria followed the construction of the Upper Keban Dam. Turkey was able to increase the flow to the Euphrates to 450 cubic meters per second by using the reserves in the Keban Dam. Turkey's infusion of stored water into the system helped prevent further conflict. The Keban dam is very efficient, because it is located in a low-evaporation, high-rainfall area. It wastes only 0.48 cubic kilometers of water a year when its lake enjoys a surface of 675-680 square kilometers. During its first year of operation, the dam suffered some seepage to an

⁹Kolars and Mitchell, *The Euphrates River*, pp. 9, 17.

underground cavern that has since been filled, compounding the problems downstream.

The dam has an installed capacity 1,240-1,360 MW of electricity.¹⁰

MAJOR DAMS AND WATER WORKS OF THE GAP

The Euphrates phase of the GAP infrastructure begins downstream from the Upper Keban dam. Of the six dams planned in the Turkish-controlled section of the Euphrates basin, three have been completed: the Upper Keban, the Karakaya, and the Attaturk dams; three additional dams, the Birecik, the Karkamis and the Adiyaman, are still under construction. Like the Upper Keban, the Karakaya dam is intended for electricity production. It can hold 9.5 cubic kilometers of water in its reservoir in order power to its 1800 MW turbines. The Upper Keban and the Karakaya dams are dwarfed by the giant Attaturk Dam -- the most important GAP project. Located 181 kilometers downstream from the Karakaya Dam, the Attaturk Dam is the world's sixth largest dam. Its reservoir can hold 48 cubic kilometers of water, making it larger than the Upper Keban and Karakaya dams combined. In terms of size, the dam's embankment volume is 84.5 million cubic meters, five times the size of the Upper Keban Dam. Its installed power capacity is 2,400 MW, and its waters will irrigate 730,000-882,000 hectares -- making the Attaturk Dam's irrigated area at least the second largest scheme in the world. The Attaturk Dam is now complete, but its associated irrigation works are not yet fully implemented.¹¹ According to Kolars and Mitchell, the dam's associated tunnel and canal

¹⁰Naff and Matson, *Water in the Middle East*, pp. 93-95; Kliot, *Water Resources and Conflict*, pp.121, 122, 127; Kolars and Mitchell, *The Euphrates River*, p. 35.

¹¹The ARI Group (An auxiliary of Turkey's Motherland Party), *GAP Project Investments*, <<http://www.arigroup.org/english/projects/projectmain.html>>, accessed 28 June 1998; Kolars and Mitchell, *The Euphrates River*, pp. 34-43; Kliot, *Water Resources and Conflict*, pp.126-129.

works are "the largest in the world, containing a twin-bore 26.4 km tunnel, 283 km of main canals, 150 km of secondary canals, and 200 km of tertiary distribution canals."

The twin-bore tunnel will deliver water to the Sanliurfa (Urfa) and Harran plains. A 50 MW powerplant is installed at the end of the tunnel system. At the powerplant, the water is to be divided into two streams to irrigate the two plains. Independently of the two tunnels, the Hilvan-Siverek canal will carry water pumped from the reservoir some 244.6 kilometers (150 kilometers on the main canal and the balance on its extensions) from the reservoir to the Siverek and Hilvan plain—a small dam is to regulate the canal's water flow; the Mardin-Ceylanpinar system is a component of the Hilvan canal, the subsystem will irrigate the Mardin and Ceylanpinar plains -- more than 265 kilometers away from the reservoir. Another Attaturk Dam-associated irrigation project is the Bozova project which aims to use water pumped from the reservoir to irrigate some 85,000 hectares. Six additional major construction projects on the Euphrates remain incomplete:

Table 9: Pending Turkish Euphrates GAP Projects.

Name	Type	Irrigated Area (ha)	Installed MW	Approx. Location	Other Information
Birecek	Dam-hydroelectric	70,000	672 MW	Euphrates between Sanliurfa and Gaziantep	Philip Holzmann AG, contractor; Syria protests construction on 3 December 1995. Iraq protests dam on 8 January 1996.
Karkamis	Dam-hydroelectric	Unknown	180 MW	Euphrates South of Birecik	Complements Birecik, 4.5 kilometers from Syrian border. Stores 1.4 cubic kilometers of water.
Adiyaman Kahta Project	Dam-all purpose	77,409	196 MW	Euphrates near Adiyaman	Sixth dam on Turkish Euphrates 1.9 cubic kilometers of water storage
Adiyaman-Goksu-Araban	Irrigation Project	71,598	NA	Euphrates near Adiyaman	None available
Surut-Baziki	Dam-all purpose	146,000	44 MW	Euphrates Basin	None available
Gaziantep	Irrigation Project	89,000	NA	Near Gaziantep	None available

SOURCES: John Barham, "Dam Developers Wear Down Bureaucrats's Hostility to BOT," *Financial Times* (7 December 1995), p. 7; Kliot, *Water Resources and Conflict*, pp. 129.

Turkey's projects on the Tigris basin are even less complete than those on the Euphrates. The Tigris phase of the GAP, although large by world standards, seems to be an afterthought when compared to the plans for the Euphrates. In essence, the projects on the Tigris River will not affect its flow into Syria and Iraq as much as similar projects on the Euphrates. Since the Syrian portion of the Tigris is very small, the practical effect of Turkey's policy on the Tigris is to provide Iraq with the water resources to compensate itself for its losses on the Euphrates. As this study shows later, Iraqi water policy is somewhat compatible with Turkey's plans for the region. Turkey's motives for sparing Iraq the water shortages it visits upon Syria may have to do with its desire to use Iraq against Syria, and to purchase its cooperation with regard to its constant operations in Northern Iraq against the Syrian-supported insurgency of the PKK (Kurdish Workers' Party). The GAP project is also closely associated with United States and European interests in the region, and the Atlantic alliance has recently shown that it is willing to look the other way when Iraq smuggles oil through Turkey or when Turkey decides to ethnically cleanse its Kurdish-populated Southeast. This suggests the relative over-emphasis of the Euphrates over the Tigris is blessed not only in Ankara but elsewhere.¹²

¹² James Risen, "Iraq's Oil Smuggling," *The New York Times*, Vol. 147 (19 June 1998), p. A1; Robert Olson, "Turkey-Syria Tensions since the Gulf War: Kurds and Water," *Middle East Policy*, Vol. 5, No. 2 (May 1997), p. 189.

Table 10: Pending Turkish Tigris GAP Projects.

Name	Type	Irrigated Area (ha)	Installed MW	Location	Other Information
Dicle-Kralkizi	2 Dams – general purpose	126,080 combined	200 MW combined	Upper Tigris near Diyarbakir	under construction in 1994
Batman	2 Dams – general purpose	37,744	185 MW	Batman river	data covers only the Batman Dam
Batman-Silvan	Dam – general purpose	213,000	300 MW	Upper Batman river	largest scheme in the Tigris basin
Garzan Project	Dam – general purpose	60,000	90 MW	Garzan tributary	
Ilisu	Dam-hydroelectric	None	1,200	Tigris proper	A very large dam with no irrigation schemes whatsoever
Cizre	Dam-general purpose	121,000	240 MW	Tigris proper	Immediately North of Syria

SOURCE: Kliot, *Water Resources and Conflict*, p. 130.

Despite having the quiet support of the United States and Europe, the GAP was beset with financial difficulties of the first order. Turkey pioneered the "Build-Operate-Transfer" scheme to finance the GAP. In addition, it has created private firms to build, own, and operate the dams and sell the water and electricity produced. Thirteen such firms have been established by the GAP Holding Company and the Turkish treasury. One firm is the Lower Euphrates Project Company (AFP in Turkish), which controls the Attaturk Dam and its associated projects. The company projects annual revenues of U.S.

\$535 million in power sales and \$510 million in water. At the time of writing, the firm currently projects an annual profit of \$650 million, and plans to offer 25% of its shares on the Turkish and international capital markets for about \$2.0 billion.¹³ Much of the GAP's funding came from commercial banks and Turkish companies created to raise capital and to act as partners to international companies based in Austria, Germany, Italy, France, Belgium, the United States, and the United Kingdom. For example, the German firm of Philip Holzmann created a partnership with the Turkish firm Gama Endustri under the financial guidance of Chase Manhattan Bank. Some European governments have guaranteed the risks undertaken by their firms; Austria, for example, issued export credits and helped arrange a U.S. \$45.5 million loan for an Austrian-led Consortium which included three Austrian firms (Elin Voith, JM Voight, and Verbund Plan) and two Turkish companies (Yuksel Insaat and Temel Su Engineering). Thanks to Austria's efforts, its firms earned a share in the \$170 million contract to build the Karakamis Dam, which is located a mere 4.5 miles away from the Syrian border. Iraq and Syria have threatened to blacklist, sue, and boycott firms and countries participating in the GAP.¹⁴

Turkey resorted to un-orthodox financial schemes because the World Bank and its related organizations refused to support the GAP. The project involves possible violations of the rights of international riparian states' rights. International funding was

¹³The ARI Group (An auxiliary of Turkey's Motherland Party), *GAP Project Investments* <<http://www.arigroup.org/english/projects/projectmain.html>>, accessed 28 June 1998.

¹⁴Alan George, "Syria and Iraq Threaten Anti-European Action," *The Middle East*, No. 255 (April 1996), p. 21.

conditioned on Turkey reaching water-sharing agreements with its neighbors.¹⁵ Sharing water is not on Turkey's agenda. According to then-Prime Minister Suleyman Demirel, now the president of Turkey, the Arab states of the fertile crescent have no rights to the water: "Why should they have any right to the waters of Turkey? Do we have a right to the petroleum of these downstream countries? The upstream countries have an absolute right to use the water as they see fit. The Turkish waters are not international waters."¹⁶ Turkey (and Syria in the case of the Yarmuk) both violate international norms when it comes to international rivers. International law, as it currently exists, "has recognized that a river and its resources are the property of the community of all riparian states."¹⁷ To that extent, the dams constitute a violation of the established norms between states. Indeed, the GAP dams have been called a "water weapon":

Despite advance warning from Turkey of the temporary cutoff, Syria and Iraq both protested that Turkey now had a water weapon that could be used against them. Indeed, in mid-1990, Turkish President Turgut Ozal threatened to restrict water flow into Syria to force it to withdraw support for Kurdish rebels operating in southern Turkey. While Turkish politicians later disavowed the threat, Syrian officials argue that Turkey has already used its power over the headwaters of the Euphrates for political goals and could do so again. When the Turkish projects are complete, the flow of the Euphrates River to Syria could be reduced by up to 40 percent, and Iraq by up to 80 percent. It is sometimes a short step from capability to implementation. The ability of Turkey to shut off the flow of the Euphrates, even temporarily, was noted by political and military strategists at the beginning of the Persian Gulf conflict. In the early days of the war, there were behind-the-scenes discussions at the United Nations about using Turkish dams on the Euphrates river to

¹⁵Kliot, *Water Resources and Conflict*, p. 131.

¹⁶Rustom Irani, "Water Wars," *New Statesman and Society* (3 May 1991), p. 25.

¹⁷Kliot, *Water Resources and Conflict*, p. 6; Julio Barberis, "International Rivers," in R. Bernhardt, ed., *Encyclopedia of Public International Law*, Vol. 9 (Amsterdam: North Holland, 1986), pp. 213-214.

deprive Iraq of a significant fraction of its fresh water supply in response to its invasion of Kuwait. While no such action was ever taken, the threat of the "water weapon" was again made clear.¹⁸

Syria is heavily dependent on the Euphrates for its drinking water, agriculture, industry, and for some of its electricity. By 1989, Syria's population was growing at the rate of 3.7 percent a year, and its demand for water was rising accordingly.¹⁹

THE POLITICAL PROBLEMS OF THE GAP

The Syrian response to the GAP has taken a rather violent form. Syria responded by supporting the insurgent Kurdish Labor Party (abbreviated PKK in Kurdish). Syrian support for the PKK may have increased after 15 January 1990. On that day, Syria lodged a formal diplomatic protest with Turkey for diverting Euphrates waters on 20 November 1989.²⁰ Turkish suspicions about Syrian support for the PKK may have been heightened by a Syrian fighter's destruction of a Turkish commercial aircraft in Turkish airspace which took place after Turkey threatened Syria with water shortages.²¹ By 1992, it was absolutely clear that Syria was actively aiding the PKK again. In April 1992, during a Syrian visit to Ankara for reviving the security protocol, the Turkish interior minister claimed that Syria was allowing the PKK to use the Lebanese Bekaa valley for training purposes during a visit to Ankara for reviving the security protocol.²² Turkey's claim about the PKK bases in Bekaa was apparently true. Immediately after a Turco-

¹⁸Gleick, "Water and Conflict," p. 94,

¹⁹*The Economist*, "Send for the Dowsers," (16 December 1989), p. 42.

²⁰*Keesing's Record of World Events* (1990), p. 37201.

²⁴*Ibid.*, p. 37595.

²²*Keesing's Record of World Events* (1992), p. 38874.

Syrian treaty was signed on 30 January 1995, the Syria closed these two bases in return for Turkish water supplies of 500 cubic meters per second.²³ A similar agreement was reached in January 1992, without any tangible consequences as far as the PKK's activities are concerned.²⁴ Turkey has arrested Ocalan, and Syria seems to have been bullied away from supporting the PKK at the present time, but Syria still enjoys the Kurdish card, and may play it again if it can be assured of Iranian or Russian allies in a confrontation with Turkey.

The PKK offered Syria an excellent opportunity to subvert Turkey. Syria does not have the power to directly threaten Turkey. The dams, which were supposedly being built to benefit the Kurds of the Southeast, loomed as a threat to Syria's existence. Syria could not invade Turkey. It could not supply the PKK with the tools of conventional warfare required to "win" a national liberation war, because that would have brought Turkey's wrath and probable invasion of Syria. It could try to make the situation in the rural Southeast beyond Turkey's control by providing a few light arms and real estate in Lebanon. Syria could also use the PKK as a bargaining chip in return for guaranteed water supplies. Once the PKK became established in Turkey, it was an even greater asset to Syria since Assad could close the bases while retaining the ability to supply his allies across the border should Turkey attempt to use the dams as a water weapon against Syria. Unlike the case of the Nile, where no direct link between water and conflict exists, the Syro-Turkish confrontation over the Euphrates has clear cultural causes.

²⁶"Syria, Turkey Seek Closer Security Cooperation," *Reuter* (30 January 1995).

²⁴"Iraqi Kurds Condemn Turkish Push Into Northern Iraq," *Reuter* (20 March 1995); Christopher Panico, "Turkey's Kurdish Conflict," *Jane's Intelligence Review* (April 1995), p. 173.

ASSESSING THE GAP

The Nile's primary problem lies in inefficient infrastructure, and the Aswan High Dam wastes 13-15 cubic kilometers of water a year. The Nile's legal structure and treaties reflect Egyptian power, but they at least exist. In sharp contrast, Turkey's dams are extremely efficient, at least from the point of view of evaporation and seepage. Water loss from the entire Turkish system is between 1.5-2.0 cubic kilometers a year out of an already installed capacity of 88-100 cubic kilometers of water. This compares favorably with the Nile where the Egyptian Aswan High Dam reservoir wastes some 13-15 cubic kilometers a year out of total reservoir capacity of 162 cubic kilometers (but often containing only 84-115 cubic kilometers). To Turkey's credit, the Upper Keban Dam has been used to help Syria and Iraq in times of natural drought. Unfortunately, the Tigris-Euphrates basin is also unlike the Nile in another way – it lacks meaningful regimes, partial or otherwise. When completed, the GAP will add 1.7 million hectares of land to Turkey's current total of 3.2 million hectares under irrigated cultivation. It will also entail the addition of 8,753 MW of installed electrical generation capacity – which equals 70 percent of Turkey's current capabilities.²⁵

Aside from political difficulties, there are two problems with the GAP. First, it is a very expensive system. The project has a projected cost of \$21 billion dollars, and according to the ARI group (an auxiliary of the Turkish motherland party), \$12 billion have already been spent by the time of writing. The program's difficult funding methods have caused serious delays. Second, it is clear that it is far more economical for Turkey to use these funds to clean up existing power generation facilities and upgrade them.

²⁵Kliot, *Water Resources and Conflict*, pp. 122, 131, 127, 137.

According to John Barham, a reporter for *The Financial Times*, Turkey could increase electrical production by as much as 10 percent by undertaking minor repairs at the Upper Keban Dam and other older facilities.²⁶ Nevertheless, it is very clear that the GAP is, at least from an overall hydrological point of view, a good idea. Yet, it is clearly troubling from one important hydrological angle. Turkey's installed reservoir capacity on the Euphrates is at least three times the annual discharge of the Euphrates. To fill Turkey's reservoirs alone, the Euphrates would have to be prevented from reaching the Syrian border for about three to four years. This suggests that Gleick's use of the term "weapon" to describe the GAP dams is appropriate; given the absence of a clear agreement between the three states over the two rivers, the motives of its builders cannot be viewed without a jaundiced eye. Thus, it is possible to argue that GAP's ultimate shortcomings are political, both internally in Turkey with regard to the Kurds and internationally with regard to Iraq and Syria.

SYRIAN WATER DEVELOPMENT PROGRAMS

Despite its aridity, Syria enjoys some rain. Out of 5,503,000 hectares under cultivation in Syria, 3,336,000 are rain-fed. Since 1960, irrigated land may have shrunk by as much as 20 percent due to water-logging, salinization, and other problems. Syria plans to irrigate 397,000 hectares in the Euphrates basin.²⁷ There are two existing major water projects on the Syrian stretch of the Euphrates, and a third is underway. Syria's largest dam is the *Al-Thawra* (The Revolution) Dam at Tabqa on the Euphrates in Central

²⁶Barham, "Dam Developers," p. 7; Klot, *Water Resources and Conflict*, pp. 125, 131, 136.

²⁷Klot, *Water Resources and Conflict*, p. 139.

Eastern Syria. The dam holds 11-12 cubic kilometers of water and loses 1.6 cubic kilometers of water every year. It is not an efficient dam, losing perhaps sixteen times as much water as a dam of the same size in the Turkish-controlled highlands to the north. It has 800 MW of installed hydroelectric power generating capability, but only 136,000-250,000 hectares of its planned 640,000 hectares of irrigation projects are in production.

The second existing Syrian program on the Euphrates is the Ba'ath Power station. This is a small dam with a 0.9 cubic kilometer reservoir. It is used to generate electricity from a 64-75 MW powerplant, and to regulate the flow of the Euphrates. Syria's third Euphrates project is the Tishreen Dam. This dam will be located northwest of Aleppo, near the Turkish border at a place called Manabij. It will hold about 1.88 cubic kilometers of water and will be used for hydroelectric power generation with an installed capacity of 630 MW and to regulate the flow of water into Lake Assad (the reservoir of the Al-Thawra Dam). A Chinese firm, Sichuan Machinery, will supply and install the turbines. The \$165 million project is being partially funded by a \$125 million loan from the Arab Fund For Economic and Social Development of Kuwait. Syria has plans for a small dam on the Khabur, which will hold 0.66 cubic kilometers of water and irrigate 40,000 hectares; consultants and contractors include Sir Alexander Gibb and Partners of the United Kingdom and various French and German firms. Two small dams are also associated with the Khabour dam project. The two small dams, built by local state-owned Syrian firms, hold a combined total of 0.30 cubic kilometers of water for irrigating up to 150,000 hectares. Syria's programs, in light of Iraqi and Turkish projects, can be described as modest. Syria's primary problem with irrigation is the inefficiency caused by the gypsum deposits that dominate its portion of the Euphrates. The gypsum deposits

damage Syria's canal works and prevent efficient irrigation. Gypsum causes substantial wasteful loss of water in Syria's canals, pipes, and fields. Syria is slowly implementing solutions to the gypsum problem. These measures include lining the soil beneath the canals with impermeable layers of material. Syria does have alternative sources of water outside the Tigris-Euphrates basin; these include the Orontes (Asi), the small rivers in the Latakia region, and the streams and groundwater resources of the Damascus region; to date, the country has constructed 135 small dams on these rivers and plans to develop more.²⁸

While Syria does need to develop its hydroelectric resources, it has a small quantity of oil and moderate deposits of "sweet" and "sour" natural gas, enabling it to meet its energy needs in a diversified way. Syria is shifting from fuel oil to natural gas in its thermal power plants, enabling it to save its oil reserves for the export market. Syria has obtained a pledge from Argentina to purchase a medical nuclear reactor once a peace treaty is signed with Israel. Furthermore, it has signed an agreement with Russia to cooperate on peaceful uses of atomic energy. One project (TEAS), will link the Syrian, Turkish, and Jordanian power grids, and Syria will be able to obtain electricity from the very Attaturk Dam it protests. Syria has also obtained a promise from Lebanon, whereby the Lebanese would import 10% of its electricity from Syria. Overall, electrical prospects

²⁸Alan George, "Dam it, it's Our Water," *The Middle East*, No. 229 (December 1993), pp. 32-33.

are bright in Syria.²⁹ Consequently, Syria's future demand for electricity may be met without developing additional hydroelectric dams on the Euphrates.

Syria's water development projects may suffer from the same sorts of political problems that plague Turkey's GAP. During 1974, Iraq asked Syria to release an additional quantity of water (200 cubic meters per second) in order to compensate it for its losses due to drought and the filling of the Al-Thawra Dam. Syria released the water, and the year passed without conflict. In 1975, when the Upper Keban Dam was also being filled, Iraq protested that Syria was releasing only 197 cubic meters per second out of a natural flow of 920 cubic meters per second. Syria protested that it was sending 71 percent of the water released by Turkey to Iraq. The crisis was solved through Saudi and Soviet mediation. Under the agreement, Syria released an additional unknown quantity of water to compensate Iraq. Thomas Naff and Ruth Matson doubt whether the 1974-1975 crisis really involved water. It is clear that Iraq and Syria reached some sort of informal arrangement over the division of waters that flow from Turkey rather easily. The real problem seems to have been the newly found freedom of the regime in Baghdad to destabilize Syria. Until 1975, Iraq, under Saddam and Abu Bakr, was fighting against the Mullah Musa Barzani revolt in Northern Iraq. That year Abu Bakr and Saddam reached an agreement with the Shah which ended his support for Mullah Musa Barzani. Suddenly, Iraq was free to torment its fellow Baathist rival. Syrian troops shifted from the Israeli front to the Iraqi border. Naff and Matson's views seem to be supported by internal Syrian events. Assad's security forces arrested some 120-200 Syrians believed to

²⁹Energy Information Administration, United States Department of Energy, *Syria* <<http://www.eia.doe.gov/emeu/cabs/syria.html>>, accessed 28 June 1998.

be sympathetic to the party's exiled "historic" leaders in Iraq. According to Naff and Matson, Assad probably wanted to eliminate any possibility of Iraqi mischief by staging a controlled confrontation over water distribution issues with Iraq.³⁰

IRAQI WATER DEVELOPMENT PROGRAMS

Like Syria, Iraq enjoys some rain. It is able to cultivate some 11.5-40 million hectares of land a year. The reason behind this disparity lies in the contradictory and confusing pile of statistics on Iraq. All told, Iraq probably has some 2.77 million hectares under irrigated cultivation.³¹ As stated earlier, Iraq was fortunate to inherit some operational ancient waterworks – Lake Habbaniya and Lake Abu Dibbis. These lakes were modified for flood control and their waters were used during the dry season. The two lakes remain in working order storing some 46 cubic kilometers of water. In contrast, the Naharawan Canal and the Nimrod Dam are long gone. Nevertheless, the despotates that created them seem to remain. Iraq's modern hydraulic infrastructure dates from 1911-1914, when the Ottoman Empire undertook the construction of the Hindiya Barrage on the Euphrates. Over the decades a series of other barrages followed. The Hindiya, Abu Dibbis, Ramadi, and Falluja barrages impede, divert, and regulate the Euphrates; the Kut and Samarra barrages carry out the same tasks on the Tigris. The Diyalah Barrage diverts the small Tigris tributary's waters for irrigation projects. Completed in 1985, the Falluja Barrage is the newest barrage in Iraq. Another important Iraqi non-dam water project is the Lake Tharthar water storage facility. Built in 1950, Lake Tharthar was created artificially from the Tharthar depression. It can store 30 cubic

³⁰Naff and Matson, *Water in the Middle East*, pp. 91- 95.

³¹Mamdouh Shahin, "Review and Assessment," p. 208.

kilometers of water in a lake under a surface area of 2,700 square kilometers. Lake Tharthar links the Tigris and Euphrates rivers and helps Iraq compensate Euphrates water deficits with surpluses from the flood-prone Tigris. Iraq is resorting to the Tigris in order to compensate for the shortages on the Euphrates. These shortages are a direct consequence of Syria's and Turkey's need to fill their respective reservoirs. Iraq is following the hydraulic script wished for by Ankara.³² Iraq's dams are few in number and some are still incomplete.

Table 11: Iraqi Dams, Operational and Proposed.

Name	Type	Storage Capacity in cubic kilometers	Installed MW	Yet Began and/or Completed	Irrig. area (ha)	River
Saddam Dam (Mosul)	General Purpose	10.7	750 MW	Late 80s- in construction by 1994	250,000	Tigris
Darband-ikhan	General Purpose	3.0-5.0	Not Known	1961	not known	Diyalah
Dukan	General purpose	0.63-0.75	400 MW	1959	NA	Lesser Zab
Qadisiyah	Hydro-electric. River control	Unknown	600 MW	By 1994	not known	Euphrates
Dibbis	Irrigation	Unknown	NA	completed by 1994	not known	Lesser Zab

SOURCE: Kliot, *Water Resources and Conflict*, p.121.

³²Shahim Tekeli, "Turkey Seeks Reconciliation for the Water Issues Induced by the Southeastern Anatolia Project (GAP)," *Water International*, Vol. 15 (1990), p. 215.

Like Syria, Iraq can resort to non-Tigris-Euphrates sources of water. The Kharun River flows from Iran into Shatt al-Arab without any Iranian extractions; some 20 cubic kilometers enter Iraq every year from Iran, and these waters may offer Iraq some breathing room with regard to Syrian and Turkish extractions from the Euphrates. In better times, Iraq could also import food by exporting oil. The economic meaning of this policy was that Iraq used oil to create "virtual water" – water it would not have to use to produce food. In effect, Iraq pursued this policy due to its poor agricultural output before the invasion of Kuwait. The sanctions and the subsequent difficulties in Iraq have shown this policy to be dangerous.

The primary problem of Iraqi agriculture is salinization. Much of Iraq's arable land remains uncultivated every year in order to reduce its levels of salinity. Some 80 percent of Iraq is affected to some extent by increasing levels of salt. Despite its massive investment in agriculture, Iraq produced less food in 1977 than it did during 1960. The agricultural practice of over-irrigation is feeding the problem of salinity. It would not be inappropriate to state that Iraq is slowly becoming a salt valley like the dead sea – some one billion tons of salt have been deposited in Lower Iraq by 1960. This problem is leading to decreases of some 30-50 percent of normal agricultural yield.³³ Given Iraq's behavior during the last 40 years (since the 1958 coup), it is an open question whether successive Iraqi governments have taken agricultural problems seriously enough.

³³Cressy, *Crossroads*, p. 390; Van R. Aart, "Drainage and Land Reclamation in the Lower Mesopotamia Plain," *Nature and Resources*, Vol. 10, No. 2 (1974), pp. 11-17; Kliot, *Water Resources and Conflict*, pp. 158-159.

IRANIAN WATER DEVELOPMENT PROGRAMS

Iran does not have any water development programs on its Tigris tributaries or on the Kharun. It is doubtful whether Iran will develop of these rivers in the immediate future, given the engineering challenges they pose. Iran is probably capable of developing the Diyala and the Lesser Zab for agriculture or power generation, but it does have abundant waters outside the basin and does not need to develop its share of the Tigris-Euphrates, albeit that these resources are not evenly distributed.

PATTERNS OF WATER USE IN THE TIGRIS-EUPHRATES BASIN

As with Ethiopia and Egypt, current contribution and consumption patterns in the Tigris-Euphrates basin reflect heavy downstream use. Unlike the Nile, the Tigris-Euphrates basin's total output is not entirely known. Table 12 shows that that Turkey and Iran contribute the vast majority of the system's water while consuming little of it.

Table 12: 1990 Annual Water Consumption Patterns in the Tigris-Euphrates in Cubic Kilometers.

Country	Contribution	Consumption (excluding reservoir storage)
Turkey	59.5	2.8
Syria	2.0	5.9
Iraq	6.8	46.7
Iran	11.2	0

SOURCE: Kliot, *Water Resources and Conflict*, p. 114, 148.

This picture is, however, altered by the rapidly changing pattern of water use. In the past Turkey used very little water, and Iraq used a great deal. Nowadays, the pattern is being changed, and the results are catastrophic for Syria and Iraq. Projections based upon

Turkey's pledge to release 16 cubic kilometers of Euphrates water a year – an amount equal to Iraq's projected 2000 use from the same river. With Syria dependent on abstractions from the Euphrates roughly equal to six to ten cubic kilometers of water by 2000, Iraq will be left with some 6.5 cubic kilometers of Euphrates water. But some 5 cubic kilometers will need to be flushed into the Shatt al-Arab waterway to keep the river's ecology at a minimal level of balance. In short, the GAP project means that Iraq may have to abandon its agriculture on the Euphrates. Turkey would like to see Iraq use Tigris waters as a replacement. Indeed, Iraq is diverting water surplus from the Tigris into the Euphrates. The table below outlines the problems that will probably be facing Iraq and Syria in 2005.

Table 13: Projected 2005 and 2040 Water Consumption and Projected Water Surpluses and Deficits in the Tigris-Euphrates Basin by State in Cubic Kilometers.

Country	2005 Projected demand (Surplus or Deficit)	2040 Projected Demand (Surplus or Deficit)
Turkey	10.7-14.7 (+32 to + 36)	28.7 (+18)
Syria	6.5-7.5 (+9.5)	13.4-13.9 (-0.5 to +2.7)
Iraq	59.5 (-12.5 to -6.5)	61.7 (-14.1 to -10.6)
Iran	? (> + 11.2?)	? (?)

SOURCE: Kliot, *Water Resources and Conflict*, pp. 143-149.

The GAP's impact on Iraq is nothing short of catastrophic. In addition, Syria is also bound to suffer, according to Kliot, if Turkey experiences any droughts or restricts the flow of water. The GAP renders Turkey the only country not subject to water scarcity at the expense of both Iraq and Syria. Despite being funded by a country openly allied with Turkey, Kliot is compelled to say that "the picture presented here clearly shows that

the patterns of utilization are inconsistent with reasonable and just water utilization in both spirit and practice."³⁴ Missing from Kliot's original table, Iran represents a wild card in this equation. As it currently stands, Iran does not utilize its Tigris-Euphrates tributaries and the Kharun to any significant extent. The Kharun puts some 24 cubic kilometers of water into Southern Iraq and the Iranian tributaries of the Tigris pour some 11.2 cubic kilometers of water into Central Iraq. A growing population may alter this picture permanently, and the Iranians may be forced to develop these resources in the future. Iran's current disinterest in developing these resources may be the last chance to reach agreements regarding the future developments of these resources. Unfortunately, political realities render this observation an inhabitant of the province of dreams.

AGRICULTURAL AND DEMOGRAPHIC TRENDS

The decline in available water to both Syria and Iraq could not have come at a worse time for these two countries. Both Syria and Iraq have seen their respective populations grow to reach levels hitherto unpredicted. Consequently, these two countries needed to increase food production to keep up with their population growth. Iraq's record, in particular, has been dismal. According to Kliot, it grew less food in 1977 than it did in 1961; Iraq's failed agricultural policies did not get replaced, and by the 1990s, the country was importing some 80 percent of its food. In essence, the Iraqis depended on a policy of substituting oil for "virtual water" in the form of imported food crops. The United Nations sanctions on Iraq proved the folly of such a policy, and the country is now in dire straits. Syria has fared only a little better with its more modest projects and rain-

³⁴Ibid.

fed agriculture, perhaps because of corruption and population growth. Kliot provides us with two tables that put the problem in perspective.

Table 14: Population Growth and Agricultural Productivity in the Tigris-Euphrates Basin.

State	Pop. 1990 Millions	Pop. 2000 Millions	Av. Annual Pop. Growth (%) 80-87	Av. Annual Pop. Growth (%) 90-2000	Av. Annual Growth Rate of Agric. 80-90	Av. Index of food Production per capita (1979- 1981=100) 1988-90
Turkey	55.9	67	2.3	1.8	3.0	97
Syria	12.5	18	3.6	3.6	-0.6	80
Iraq	15.6	26	3.6	3.4	No data	92
Iran	54.6	69	3.0	2.3	4.0	104

SOURCE: Kliot, *Water Resources and Conflict*, p. 153.

Turkey and Iran were the only countries in the region to see growth of their agriculture keep pace with population growth. Syria's program, although probably better performing than Iraq's, is also clearly below par. Iran and Turkey had not significantly increased their production on a *per capita* basis. Syria's position is closer to Iraq's in terms of food imports, at least in absolute terms. Overall the picture for the region looks grim, and only Turkey and perhaps Iran can escape the crunch brought about by rising populations and the problem of water. According to the 1997 CIA Factbook, live animals and other foods constitute some 15 percent of Syria's imports.³⁵

³⁵The Central Intelligence Agency, *World Factbook 1997*,
<<http://www.odci.gov/cia/publications/factbook/sy.html>>, accessed 28 June 1998.

Table 15: Food Importation into the Tigris-Euphrates Basin by State.

Country	Cereal Imports 1000s of metric tons	Food aid in Cereals 1000s of metric tons.	Food Aid (millions \$)	Food imports as a %age share of imported Merch.
	1990	89-90	89-90	1990
Turkey	3.177	13	0	7
Syria	2.091	22	4.0	17
Iraq	2.834	no data	no data	15
Iran	6.250	22	no data	12

SOURCE: Kliot, *Water Resources and Conflict*, p. 154.

Unlike the Nile, where Ethiopia has borne the brunt of Egypt's policies, it can be safely argued that Iraq's quandary is largely its own doing. The vast resources it spent fighting its neighbors and its own people cannot be disregarded in any analysis. These resources could have been applied to agriculture, and Iraq may have been able to cope with the reduction in water supplies by introducing efficient new technologies. Iran's relatively large imports reflect the rapid growth of its population since the overthrow of the Shah. Despite immense losses during the Iran-Iraq war, Iran's population more than doubled since the departure of the Shah. Furthermore, despite Iran's insistence that newlyweds get contraceptive education, the population of Iran is likely to grow to a level that will dwarf even the vast population of Turkey.

Table 16: Current Population and the 2010 and 2020 Population Projections for Tigris-Euphrates Basin States in Millions.

Country	1996	2010	2020
Turkey	62.48	76.57	85.56
Syria	15.61	23.33	28.93
Iraq	21.42	34.55	46.26
Iran	66.10	88.23	104.28

SOURCE: U.S. Department of Commerce, Bureau of the Census, as cited by *The World Almanac and Book of Facts 1997*, (Mahwah, N.J.: World Almanac Books, 1996), pp. 838-839.

The difference in projected populations of Turkey and Iran in 2020 is equivalent to the whole population of Syria today. This fact has two profound implications for the Tigris-Euphrates basin. First, the window of potential Iranian hydraulic assistance to Iraq and Syria is rapidly closing. Iran will face immense pressures to develop the Kharun and Lesser Zab rivers, despite the immense technical difficulties it is likely to face in this endeavor given the difficult terrain of its rivers. Traditional Iranian agriculture relied on the *Qanat* system. These naturally-replenished horizontal wells (heuristically speaking, special tunnels) have been used for many millennia in Iran with great success, and to a large extent, they remain the backbone of Iranian agriculture. One of the first acts of the Islamic government was to repair and clean as many of the *Qanat* systems as possible.³⁶ But, as population increases, it doubtful that Iran can afford to ignore the Kharun and its Tigris tributaries. Consequently, any serious attempts at regime construction must take place very soon, otherwise Iran and Iraq may be replicating the disputes that currently

³⁶Helen Metz, ed., *Iran: A Country Study* (Washington, D.C.: Federal Research Division, Library of Congress, December 1987),
<<http://lcweb2.loc.gov/frd/cs/cshome.html>>, accessed 28 June 1998.

exist between Syria and Turkey. Second, the rapid rise in Iran's population alters the military balance in the Middle East. Iran is more than twice the size of Turkey and is probably the only Middle Eastern state that can absorb vast casualties and replace them. These realities have relevance both within and without the Tigris-Euphrates basin. For the basin itself, the rise of Iranian power means that agreements and regimes that exclude Iran are probably ineffectual. In addition, Iran's weight is likely to influence the course of any conflicts in the region, including those not directly involving Iran.

REGIMES

Iran was excluded from the first attempt to set up a regional riparian regime in 1980. The regime, so far, has been a dismal failure. Its early years were troubled by the Syrian-Iraqi disputes; Syrian representatives refused to attend meetings with Turkish representatives if the Iraqis were present.³⁷ The regime was named after the Egyptian-Sudanese Permanent Joint Technical Committee, but it has failed to measure up to even the modest success of the Egyptian Sudanese body. The Joint Technical Commission has failed because Turkey and its Arab neighbors have radically different visions regarding its role. The regimes are not allocative and suffer from tremendous problems because Turkey sees the rivers as Turkish property and applies the Harmon doctrine. For Turkey, the regime is a consultative body and not an allocative one. Syria and Iraq see the regime's future role as allocation rather than consultation. Material obtained from the Turkish Ministry of Foreign Affairs clearly indicates that Turkey views the Tigris-Euphrates Permanent Joint Technical Commission as "forum" for *discussing* water issues.

³⁷Lowi, "Rivers of Conflict," p. 138.

Furthermore, Turkey is adamant that it is sending clean water in adequate quantities to Syria and Iraq.³⁸ The Syrian, and increasingly Iraqi, position has been that the Tigris-Euphrates Permanent Joint Technical Commission is an allocative body. In a joint Syrian-Iraqi meeting held in October 1997, the two countries invited Turkey to discuss water distribution with them. Turkey refused to attend.³⁹ In addition to the Permanent Joint Technical Commission, there have been a number of Syro-Turkish protocols guaranteeing Syria 500 cubic meters of water per second in return for terminating its support for the PKK (Kurdish Workers' Party). These protocols seem to have been honored only in their repetitive breach by both sides. The absence of Iran in the Permanent Joint Technical Commission renders it less effective, because Iran brings 30-35 cubic kilometers of water to the equation. Iranian water, particularly the 20-24 cubic kilometers supplied by the Kharun to the Shatt al-Arab and shortly thereafter to the Persian Gulf (immediately outside the Tigris Euphrates basin) could be partially used to address some of the concerns of Syria and Iraq under an arrangement with Iran. It is doubtful that Turkey could accept such a role for Iran given the competition between the two states. Turkey's difficulties with Iraq and Syria have roots in feelings of betrayal dating to World War I. The lack of cooperation stems from Turkey's image of itself and its view of the Arabs in general. These views will be discussed in more depth later, but they are ultimately rooted in the slow collapse of the Ottoman Empire between 1850 and 1924.

³⁸The Turkish Ministry of Foreign Affairs, "Water a Source of Conflict or Cooperation in the Middle East" <<http://www.mfa.gov.tr>>, accessed 28 September 1998.

³⁹*Arabic News* (10 October 1997) <<http://www.arabicnews.com>>, accessed 28 June 1998.

POLITICAL CONFLICTS AND WAR

The greatest conflict that marked the collapse of the Ottoman Empire was the Arab revolt of World War I led by Hussein Al-Hashem -- the Hashemite *Sharif* (lord/nobleman in Arabic) of Mecca and the direct ancestor of the current king of Jordan who retains the old title despite the loss of Mecca to the Saudis. The Arab revolt marked the second major modern conflict in the basin itself.

EGYPT INVADES ITS OTTOMAN MASTER

Muhammad Ali, the ruler of Egypt, had invaded Syria and Anatolia in the last century, but as with his invasions of Sudan and Ethiopia, his aims were power, people, and territory. Unlike the Nile basin, however, Egyptian power in the Tigris-Euphrates basin was not welcomed by the great powers, and the conquest proved short-lived. Before discussing the Arab Revolt, it is important to remember that the Arab provinces of the Ottoman Empire and most of the nearby independent and British-controlled Arab states of Nejd (the core of what later became Saudi Arabia), Kuwait, the Trucial Coast (the future UAE), and the other Gulf emirates did not possess separate identities. People in these entities identified with their tribes and with their common Arab heritage. The creation of Jordan, Syria, Iraq, Hejaz, Lebanon and Palestine was a product of both local and international factors that followed the war. These factors will be discussed in the sections dealing with the formation of Syria and Iraq.

THE ARAB REVOLT

The factors that led to the Arab revolt are far clearer than the events that followed it. Before beginning, however, it is important to remember that the British were already cultivating *Sharif* Hussein for a long time before the Arab Revolt began. The immediate

cause of the revolt was the appointment of Jamal *Pasha* (Cemal *Pasha* in Turkish) as the governor of Syria in May 1915. In February 1915, Turkey was defeated at the Suez Canal by the British and their Egyptian allies. Jamal *Pasha* was the Turkish commander at the Suez canal. Two giants of pan-Arab history, George Antonius and Sulayman Mousa blame the events that followed on Jamal *Pasha*'s inability to cope with that defeat.⁴⁰ These events included deportation, execution, and imprisonment of both real and perceived opponents of Ottoman rule. Hasan Kayali, an Ottoman studies scholar at the University of California at Berkeley, provides us with a picture of Jamal's reign of terror in Syria. Jamal's capture of the French consulate in Beirut provided him with the details of France's links with Arab cultural, political and economic leaders in the Levant. Jamal used this documentation, most of which preceded the reconciliation of most of these Arab leaders with the Ottoman government, to try and execute Arab leaders in the Syrian provinces of the Ottoman Empire. The first to be executed was a Lebanese Maronite priest. Later, 11 Lebanese leaders were executed including 10 leading Beirut Muslims. Gradually the circle of executions grew to include leading Arab bureaucrats and political leaders in Syria proper. The reign of terror reached its apex with the forceful removal of 5,000 elite Arab families to Anatolia. Kayali does not disregard the explanations offered by Antonius and Mousa outright. In his judgment, however, the Syrians were the targets of policies applied earlier by Jamal in Baghdad and Istanbul against his political opponents. According to Kayali, the measures taken by the dying

⁴⁰Sulayman Mousa, *T.E. Lawrence: An Arab View*, Albert Boutros, trans. (London: Oxford University Press, 1966) p. 14; Hasan Kayali, *Arabs and Young Turks: Ottomanism, Arabism, and Islamism in the Ottoman Empire - 1908-1918* (Berkeley, Calif.: University of California Press, 1997), p. 193.

Ottoman Empire in Syria were a mild form of the policies applied to the Ottoman Empire's Armenian community. The policies of executing leaders and deporting populations grew out of fears of national revolts by the Empire's subject peoples.⁴¹

Given that there was no real border or a sense of separate identity between Syria and Hejaz, the *Sharif* of Mecca reacted to the execution of his fellow Arabs in Syria and Lebanon. In his 27 June 1916 *fatwa* calling for the Arab Revolt, *Sharif* Hussein lists his services to the Ottoman Empire, his wars against Arab rebel on behalf of the Porte, denounces secular reforms, the curtailment of the Ottoman Sultan's powers, and perhaps most importantly, the executions in Syria. The *fatwa* came as an afterthought. Hussein and his sons had attacked Ottoman power centers in Mecca earlier that month. The executions of leading Syrian Arabs had a positive effect on Hussein's recruitment efforts. Many Arab officers in the Ottoman Army defected to his side, and exiled Arab opponents of the Ottoman government came to Hijaz to support him. When the news of Hussein's victories reached Syria proper, support for his drive for Arab independence increased. By fall 1916, Hussein had assumed the title of the king of Hijaz. Jamal responded by executing more Arab leaders, both Christian and Muslim, in Damascus. He further damaged the Ottoman Empire's position in Syria by attempting to control food production and exchange by authorizing "safe" Syrian notables to purchase grain for the state with paper banknotes. Peasants refused to sell their crops and draft animals were either dead or impressed into military service so whatever food that existed could not be transported by animals. In addition, Ottoman Syria's railways could not operate due to a shortage of coal, so transporting surplus food from other parts of the Empire or from its

⁴¹Kayali, *Arabs and Young Turks*, pp. 193-194.

Central Powers allies was not possible even if such a surplus had been available. By 1919, some 90 percent of Syria's pre-war cattle herds were gone. Faced with this crisis, Jamal responded by building boulevards in Damascus and Jaffa (now a part of Tel Aviv) and restoring historical buildings to show that the Ottoman Empire was determined to retain control. Needless to say, hunger and starvation marked Jamal's rule in Syria, Palestine, and Lebanon. Jamal finally resigned in December 1917 and went back to Turkey proper. In the meantime, Hussein's new armies, along with the troops of his British allies, and the French were pushing into Syria, Palestine, and Lebanon. Arab cities and towns in Syria and the Tigris-Euphrates basin began to fall to Hussein's forces like old wooden fences in front of elephants. By October 1918, Syria, Lebanon and Palestine were under the control of Anglo-Arab armies led by Hussein and Sir Edmund Allenby--whose name remains on the bridge that connects the West Bank with Jordan..⁴²

Properly understood, the Arab Revolt was World War I in the Middle East. It is perhaps the most important conflict in the region's history, because the war and the associated state-sponsored terror have built a wall of immense mistrust between Turkey and its Arab neighbors. Syria, Lebanon, Iraq and Jordan regard the Arab revolt as the initial spark of their independence which was achieved some three decades later. The Palestinians also regard it as an important and positive event in their history. Turkey regards it as "a monumental act of betrayal."⁴³ According to Kayali, many Syrians regard Jamal's reign of terror as a failed attempt to exterminate the Arabs of Syria along the

⁴²Ibid., pp. 192-205.

⁴³Philip Robins, *Turkey and the Middle East* (London: Royal Insitute of International Affairs, Pinter Press, 1991), p. 19; Meltem Müftüler, *Turkey in the Middle East: In Search of a New Role* (Chicago: ISA Conference Paper, 21 February 1995), p. 6.

lines of policies carried out in Ottoman Armenia. The surviving Armenians were resettled in Syria and Lebanon at the same time leading Syrians were being evicted, thus feeding Syrian fears of Turkey and seeding future Syrian views of Turkey with profound mistrust through their mere presence. Suffice it to say, the waters of the Euphrates and the Tigris were not a motivating factor in this war -- this was a classical national liberation conflict. Like the Arab Revolt, most of today's conflicts are about national identity. Specifically, most of today's wars in the Tigris-Euphrates basin are about the Kurdish question. Turkey contains half the Kurds in the Tigris-Euphrates basin, and its Kurdish community has been the source of several revolts since 1930. The largest and most serious of these revolts has been the recent PKK revolt. The PKK is important for another important reason – it is the only conflict in the region with what seems to be, on the face of it, a nexus to water disputes.

THE KURDS AND TURKEY

The primary document of the PKK is the *Path of the Kurdish Revolution* which was written in Diyarbakir, Turkey in 1977. The document sees Kurdistan as a colony in the traditional Marxist sense. It condemns Kurds who collaborate with Turkey, Turkified Kurdish intellectuals, and Kurdish businessmen. The document draws a picture of a future Kurdish classless society as the ultimate aim of the PKK. According to PKK leader Abdullah Ocalan and his followers, such society would end tribalism, religious sectarianism, and the oppression of Kurdish women. The PKK seems to be dealing with the uncertainty about the causes of Kurdish oppression, poverty and inequality in Turkey. The PKK's answer, in the *Path of the Kurdish Revolution*, is that Kurds are oppressed

because they are Kurds living in a Turkish state that prohibits them from even using their language *and* because they are sheep-herders, peasants and laborers.⁴⁴

From the time of its official founding in 1978 until the 1980 coup, the PKK took advantage of the polarization and the militarization of Turkish political life to conduct what can be described as terrorist attacks against Turkish and Kurdish targets in the Southeast. In addition, it began to conduct bank raids, robberies, drug deals and other sundry criminal activities to acquire money. Ocalan may have decided to raise money quickly, because he seems to have realized that a coup was in the making. Ocalan's successful escape to Syria suggests that he knew of the coup and planned accordingly. The 1980 coup brought the anarchy in Turkey under control and the military junta moved to arrest and imprison Kurdish and Turkish-leftist activists. The coup moved against Kurdish intellectuals, imprisoning a former Kurdish cabinet member in 1981.⁴⁵ But, the junta failed to destroy the PKK. In 1983, the junta handed power to an elected conservative civilian government, led by Turgut Ozal. Soon after the coup, the surviving members of the PKK established themselves in Syria and the Bekaa Valley of Lebanon with Hafez al-Asad's approval and support. With 100 guerrillas, Ocalan and his followers began the insurgency. They may have started in 1983 ,and not 1984 as is widely reported. The insurgency is now inactive, because Abdullah Ocalan,

⁴⁴Nader Entessar, *Kurdish Ethnonationalism* (Boulder, Colo.: Lynne Rienner, 1992), pp. 93-94.

⁴⁵Gerard Chaliand, *The Kurdish Tragedy* (London: Zed Books, 1994), p. 48. Entessar, pp. 95-97.

who seems to play a major role in the PKK's war efforts has been captured by Turkey. Ocalan seems to have the support of many, if not most, Kurds in Turkey and Kurds overseas.⁴⁶

Without some domestic basis for support, Ocalan's war would not have been as successful as it has been. The insurgency had little difficulty recruiting guerrillas. Since 1984, Turkish politics has been characterized by the liberal use of the death penalty to dispose of regime opponents. Examining *Keesing's Record of World Events*, would confirm this conclusion. Turkish courts have sentenced people to death for "treason" virtually every year. This may seem to be an efficient way to liquidate the PKK and its supporters, but it fed its support base and increased the number of its recruits, as the family members of those condemned seek vengeance on Turkey. According to Gerard Chaliand, the Kurds practice "group guilt." If a Kurd is killed, his or her family will extract vengeance on the tribe, family, or group of the persons who killed him or her. As a consequence, it is very likely that the executions, both legal and extra-judicial, of accused PKK members were and perhaps are feeding the PKK's recruit pool. In January 1989, Turkey launched an investigation into a mass grave. The grave is said to have been found outside the city of Siirt. It contained the bodies of 350 people who were suspected of PKK membership, apparently killed by the Turkish Army. In June 1989, reports surfaced linking the government to two additional mass graves in Siirt with 100 entombed bodies each.⁴⁷ The PKK's recruit pool was been further enhanced by some of

⁴⁶*Keesing's Record of World Events* (1984), p. 33037.

⁴⁷Chaliand, *The Kurdish Tragedy*, pp. 20-21; *Keesing's Record of World Events* (1989), p. 36565; *Keesing's Record of World Events*, (1990), p. 37594.

the Turkish government's policies. These policies include banning Kurdish political parties, arrest and prosecution of Kurdish members of the Turkish Grand National Assembly (GNA), and the criminalization of the use of Kurdish in printing and broadcasting, and toleration of violent Turkish ultra-nationalist organizations such as the Grey Wolves, the Grey Arrow, and the Turkish National party of the late retired Turkish army Colonel Alparslan Turkes.

Since 1993, the Turkish government has banned three Kurdish parties that held seats in the GNA. The first party to be banned was the People's Labor Party (PLP), which held four seats in the GNA. In a move that foretold the ultimate fate of the Kurdish parliamentary delegation, the parliamentary immunity of three of the party's four representatives was lifted. The party was charged with violating the Turkish constitution and banned on 14 July 1993. The second party to be banned, the Freedom and Democracy party (FDP), was ordered dissolved for recognizing a separate Kurdish identity. The third Kurdish party to be banned was the "Turkish" Democracy party (TDP). On 16 June 1994, Turkey's prosecutor-general accused the party's GNA delegation of being "terrorists," and the party was banned. Six of its deputies fled to Europe, and Turkey was trying to extradite them.⁴⁸

Several more Kurdish deputies were imprisoned for treason. In March and April of 1994, seven Kurdish TDP GNA deputies were arrested, five being charged with treason for failing to condemn the PKK. On 24 July, two additional TDP deputies were arrested and charged with treason. These arrests and prosecutions came following a

⁴⁸*Keesing's Record of World Events* (1993), p. 39547, (1992), p. 39882, and (1994), p. 40069.

year of assassinations that took the lives of 54 leading TDP figures, including Kurdish GNA member Mehmet Sincar, the leader of the TDP 17-deputy delegation, on 4 September 1994. Forty-six days later, Sincar's heir to the party's leadership, Yasar Kaya, was arrested and charged with attempting to subvert the constitution. With hindsight, it is safe to say that the exclusion of Kurds from legal politics in Turkey began by the slow expulsion, resignation or ostracism of the 18 Kurdish GNA deputies belonging to the Turkish Social Democratic Populist party beginning 1992. Essentially, the Grand National Assembly was "ethnically cleansed" of Kurds and their districts were denied by-elections.⁴⁹

Aside from the ostracism and assassination of Kurdish politicians, the conflict has seen the active involvement of the Turkish extreme right. Between February and September 1992, *Goz-Ok* (Grey Arrow), a Turkish extreme nationalist group, may have murdered 9 journalists in the Southeast. Four journalists who worked for *Ozgur Gundem*, a pro-Kurdish newspaper, were certainly murdered by Grey Arrow, including Musa Anter, the dean of Turkey's Kurdish media and a founder of the PLP. Anter was killed in the provincial town of Diyarbakir. No arrests have been reported. The language of the media has been a thorny issue in Turkey. Kurdish was illegal for use in any context until 1988. On 18 February 1988, Kurdish was legalized for use in military prisons. In January 1991, during the GNA brief flirtation with liberalizing Turkey's Kurdish policy, Kurdish was legalized for singing and speaking. But Kurdish remained illegal for the purposes of broadcasting and printing. In April 1990, the government

⁴⁹*Keesing's Record of World Events*, (1994), p. 40069, (1994) , p. 40118, (1993) p. 39657, (1993), p. 39755, and (1994), p. 40299.

restricted reporting from the Southeast. Turkish police also raided publishing houses in Istanbul and prohibited the publication of 18 periodicals that had shown sympathy towards the Kurds. Two years later, Turkey banned private television stations in an effort to reduce Kurdish and Islamic fundamentalist broadcasts. In December 1993, Turkey banned *Ozgur Gundem*, a pro-Kurdish newspaper, for two months and sentenced its editor to four years in prison.⁵⁰ Barkey distills the essence of the war, and the GAP project itself, into a clash over identity:

Until recently, denial of Kurdish identity was Turkey's basic response to the Kurdish issue. Not only were publications in Kurdish banned, but writing and speaking the Kurdish language was forbidden. In effect, the state pretended that the Kurds were Turks of a different sort, who had to be assimilated into the cultural mainstream. Hence, the official and privately owned media never referred to the Kurds as Kurds, but rather as brigands or separatists. A significant segment of the Turkish body politic still holds to this view. In addition, to the nationalist right-wing, the statist left, as represented by former Prime Minister Bulent Ecevit--has maintained that the essence of the Kurdish problem was essentially economic; that is, if the region's underdevelopment and feudal structure could be resolved, the Kurdish insurrection would simply disappear. Consequently a great deal of hope has been placed on the completion of the south-east Anatolia project (GAP). This is a mammoth 22-dam project that will tap the waters of the Tigris and Euphrates rivers, resulting in a significant increase in arable land and electricity generation. By ending the central government's neglect of the region and reducing its chronic poverty, GAP -- which is far from completion -- is, nonetheless, viewed as a step towards bringing the Kurdish insurrection under control. A more common view blames the Kurdish revolt on Syria, Iraq, and lately Iran and Armenia, for supplying the PKK with weapons and even manpower. For those who subscribe to this view, the problem is defined in terms of interdicting arms supplies. This approach, however, ignores the fact that a significant portion of the PKK's infrastructure has moved inside Turkey and that the PKK now has numerous sources of weaponry and funds.⁵¹

⁵⁰Ibid., (1992), p. 39114, (1991), p. 38158, (1990), p. 37389, (1993), p. 39434, and (1993) p. 39790.

⁵¹Henri J. Barkey, "Turkey's Kurdish Dilemma," *Survival*, Vol. 35 (Winter 1993), p. 56.

Yet given Syria's important role (which Barkey seems to grant) at the beginning of the insurgency, it is nevertheless important to evaluate the roles played by outside powers. Syria's relationship with the PKK has already been discussed in the section on the GAP.

Unlike Syria, Iran and Iraq have had a mixed relationship with Turkey. These two states are far less supportive of the PKK than Syria was. Iran and Iraq have frequently allowed Turkey to send troops and aircraft into their respective territories in pursuit of the PKK. Iraq allowed Turkey to pursue the PKK into its territory in 1984, 1986, 1991, 1992 and virtually every other year or two; at the time of writing, Turkey again entered Northern Iraq and is currently threatening to invade Syria.⁵² Iraq had allowed Turkey to bomb the PKK despite Turkey's decision to side with the United States. Only during the most recent incursion has Iraq expressed any reservations about the presence of Turkish troops on its territory. Iran's case is slightly more complex. Like Iraq, it allowed Turkey to pursue the PKK into its territory in 1985 and 1986. But Iran seems to have only tensely tolerated Turkish incursions. Neither Iran nor Iraq can protest Turkish actions too loudly, because Iranian troops were discovered on Turkish soil attempting to enter Iraq during the Iran-Iraq war; Turkey also permitted Iraqi warplanes to bomb Kurdish villages its territory. In early 1994, Turkish aircraft bombed non-PKK Iranian villages and apologized for the incident. Iran also protested Turkey's failure to create a safe environment for Iranian shoppers and tourists after an Iranian toddler was killed during the PKK's Mus train attack in June 1992.⁵³

⁵² "10,000 Turk Soldiers Move Into Iraq," *Associated Press* (7:07 PM EDT, 3 October 1998).

⁵³ Leon Barkho, "Baghdad Upset Over Turkish Thrust," *Reuter* (22 March 1995).

The two countries have substantial Kurdish revolts of their own. Iran's problems are compounded by *Mujahidi-e Khalq*, a heavily-armed Iraqi-supported Iranian group opposed to the Islamic Republic. The Ayatollahs often need Turkey's support and cooperation to catch escaping Kurdish rebels. They have little interest in actively supporting the PKK. For example, Iran and Turkey signed an agreement binding Iran not to assist the PKK in return for Turkey's suppression of the *Mujahidi-e Khalq* activities. Yet Iran's shaky control of its own Kurdistan opened up doors for the PKK and other Kurdish groups who can use rural Iranian Kurdistan as a hideout, a weapons source, or a recovery area for the wounded. Iranian and Iraqi Kurdistan also provided the PKK with access to looted, captured, and stolen weapons from the Operation Desert Storm and the Iran-Iraq war. Nevertheless, Iran can at least claim a measure of nominal control over Iranian Kurdistan. In Iraq, on the other hand, Iraqi-based Patriotic Union of Kurdistan (PUK) and the Kurdish Democratic Party (KDP) have become actors on their own right Middle Eastern scene.

Since 1983, PUK and the KDP have sometimes allowed the PKK refuge and bases in Northern Iraq, as evidenced by Turkish pursuit of the PKK into areas where these two groups had a great deal of influence, if not control. It is well known that PUK and the KDP frequently fight each other. Less well known is the cycle of conflict and cooperation between the PKK and the KDP. The KDP mattered more to the PKK than PUK since it controls the border areas from which the PKK can conduct operations in Turkey. In 1983, Massoud Barazani, the leader of the KDP, went searching for allies in Turkey. He found that the PKK was interested in using the Northern Iraq for operation in Turkey. Three years later, Barzani's KDP was shaken by a massive Turkish artillery

barrage in retaliation for the PKK's murder of 12 gendarmes in Hakkari. By 1987, Barzani was beginning to feel threatened by the PKK and disgusted by its terrorist tactics which targeted civilians, including women and children. Concerned about Turkey's anger, and fearful for his party's own position, he ended the KDP's alliance with the PKK in 1987. For a time, the PKK substituted the KDP with PUK and a variety of small, violent, and urban Turkish leftist groups, that gave it bases and safe houses in Turkey's cities and towns.⁵⁴

But these groups did not have the territory the PKK needed. It is safe to say that between 1987 and 1991, the PKK depended more on Syria and less on Northern Iraq as a base of operations. Operation Desert Storm saw the return of the PKK to Northern Iraq. The American-led war against Iraq offered PUK and the KDP military assistance against Saddam Hussein's forces in exchange for real estate for bases and camps. PUK and the KDP, already forced into a loveless alliance by Saddam Hussein's forces, were not in a position to refuse. As stated earlier, Turkey forced PUK and the KDP to move against the PKK in October and November 1992; but it was a half-hearted effort, the KDP and PUK must have been aware of the presence of school girls in the PKK's camps. The two Iraqi Kurdish factions placed 1000 PKK fighters under house arrest and then allowed them to disappear into Iran, Syria, Turkey, and Iraq. Less than 400 PKK guerrillas were killed, but PUK and the KDP told Ankara that the PKK suffered more than 2,000 casualties.⁵⁵

⁵⁴Chaliand, *The Kurdish Tragedy*, p. 49.

⁵⁵Aziz Scott, "PKK Opens Second Front" *International Defense Review* (February 1991), p. 7023; Tammy Arbuckle, "Winter Campaign in Kurdistan: Can Turkey's New Strategy Crush the PKK?" *Jane's Defense Review*, (February 1995), p. 59.

One of the positive consequences, for both Turkey and the PKK, was the creation of a mutually-acceptable channel of communication between Ankara and the PKK in the person of PUK's Jalal Talabani. Talabani arranged the March 1993 *de facto* cease-fire between Turkey and the PKK⁵⁶. Apparently, sometime during the early nineties, the PKK found its way back to Northern Iraq, and re-established the camps and bases it had lost in 1987 and 1992. The relationship between the PKK, PUK, and the KDP is complex. While the KDP and PUK fight each other or the PKK often, neither organization seems to want to see the PKK totally destroyed. Perhaps, the PKK was or is giving the Iraqi Kurds access to Turkey or access to its financial networks in Europe and elsewhere. Suffice it to say, that the PKK's military capabilities were enhanced by its access to Northern Iraq.

For the Kurdish supporters of the PKK, the conflict is a war for establishing Kurdish identity, supported by a Kurdish state; the KDP and PUK also share the PKK nationalist aims and justifications, but they are forced to act upon these goals in dramatically different framework, Northern Iraq, where Turkey and Saddam can sometimes be of use to one faction or another. For Syria, the conflict provides the country with a tool to punish Turkey not only for the GAP but for much larger problems. Syria's problems with Turkey are historical and cultural. Mutual distrust and anger from the reign of Jamal Pasha in Syria, the Arab Revolt and the giveaway of Alexandretta (Hatay) by the French will poison Syria's relationship with Turkey for decades to come, even a *detente* of sorts emerges. Turkey may have defeated the PKK, but that hardly means that it has destroyed the movement, particularly in urban areas or in the villages. Once the gendarmes and the soldiers are gone, as they inevitably will be, the PKK's

⁵⁶*Keesing's Record of World Events* (1993), p. 39387.

irregulars, or others like them, will return to haunt the wild mountains. Like the Arab Revolt before it, the PKK is a national liberation movement or a terrorist organization, depending on who you ask. While Syria was using the PKK to punish Turkey for the GAP, it is clear that the causes that led to its formation and insurgency have to do with Turkey's internal cultural and social policies.

THE KURDS AND IRAQ

The Kurds of Iraq rejected the formation of the Iraqi state in its current form. To that extent, the KDP and the PUK represent only the latest revolts against Baghdad. Iraq has seen Kurdish revolts in 1922, 1943-1945, 1961, 1963-1968, 1974-1975 and finally during and shortly after Operation Desert Storm; this latest revolt is on-going. There have been dozens of leaders, parties, and factions, but since 1942 the Barzani family has played an important role. In all of these revolts, the Kurds divided themselves into factions and were manipulated by outside powers.⁵⁷

Iran used the Kurds superbly during the 1960s against Iraq. Aided by Israel and the United States, the Shah assisted mullah Mustafa Barzani's revolt in Iraqi Kurdistan. The 1958 coup had initially led to the return of Barzani from exile, but Qasim (the first post-Monarchical leader in Iraq) soon began to suspect Barzani. These suspicions soured the relationship and fertilized the soil for Iran's Kurdish policy. Qasim gave the Shah further reasons for assisting Barzani when he attempted to take Khuzistan, an Iranian province with an Arabic-speaking majority.⁵⁸ Barzani had started his revolt in 1961, and the presence of Iranian and Israeli aid by 1969 helped him consolidate his position. Iran

⁵⁷Chaliand, *The Kurdish Tragedy*, pp. 51-72.

⁵⁸Metz, ed., *Iraq*, pp. 52-53.

and Iraq were disputing Iran's navigation rights in the Shatt al-Arab waterway in southern Iraq. During the same year, the Shah abrogated the Saadabad treaty that gave Iraq control of the waterway and obliged Iran, Turkey, Afghanistan and Iraq to cooperate with regard to the Kurdish issue. By early 1966, Abd al-Salam Arif, the leader of Iraq, attempted to re-establish Iraqi authority in Kurdistan, but he was defeated in May-June 1966 by Barzani. For the Kurds, Iranian (and indirectly U.S. and Israeli) aid was crucial. By 1970, Barzani had established a de-facto Kurdish quasi-state in northern Iraq with Iranian support.⁵⁹ Saddam and his immediate predecessor Al-Bakr re-ignited the civil war in 1969, but they quickly failed to accomplish a meaningful victory, so the Baath attempted to restore the sort of agreement that Arif had reached with Barazani. The resulting 11 March 1970 agreements provided for a census to determine the limits of the Kurdish region within Iraq, the legalization of the Kurdish Democratic Party, and an autonomy guarantee. Yet it is clear that the Baath negotiated in bad faith, because the census was never held and because it seems to have attempted to murder Barazani at least twice. Iraq's Kurdish problems remain unresolved to this day, and a solution excluding strong autonomy is no longer realistic.⁶⁰

In all instances, the Kurds' motives are national rather than hydraulic. Since 1922, the Kurds of Iraq have sought to secede from Baghdad and form their own state. The United States has recently managed to bridge the gap between the KDP and the PUK,

⁵⁹Ibid.; Michael Gunter, *Mulla Mustafa Barzani and the Kurdish Rebellion in Iraq* (San Diego, Calif.: 36th Annual ISA Conference Paper 1995), p. 1; *The Middle East and North Africa: Europe Yearbook*, 41st edition (London: Europa Publications, 1995), pp. 469-470.

⁶⁰Chaliand, *The Kurdish Tragedy*, pp. 60-62.

and the long suspended Kurdish assembly in Iraqi Kurdistan may be reconvened with a stable, United States-backed administration. Current U.S. efforts in this regard represent a substantial move towards statehood for the Kurds of Northern Iraq.⁶¹ This goal, while denied so far, has nothing to do with control over the Tigris-Euphrates. Nevertheless, Turkey's policy of encouraging Iraq to use the Tigris is curious in light of the Iraqi Kurds's desire for independence. Turkey is essentially forcing Iraq to depend on waters emanating from a heavily Kurdish region within its own territory. Turkey is trying to lock Iraq into a position where it cannot accept Kurdish independence in its Northern third as a method of ending its internal troubles. If this analysis is correct, it suggests that water is a tool and not a cause of war in and of itself. It also suggests that ethno-national motives are behind the GAP rather than hydraulic, economic or agricultural concerns. To that extent, the efficiency of the GAP dams is co-incidental to Turkey's policy of suppressing Kurdish independence. Therefore, the sourcing of Iraq's water matters only to the extent that it forces the country into an alliance with Turkey against Kurdish independence. This would also explain Turkey's preference for developing the Tigris and the Euphrates instead of other rivers that flow entirely within Turkish territory.

THE KURDS AND IRAN

Like the Kurds of Turkey and Iraq, the Kurds of Iran have revolted on more than one occasion. The earliest of these revolts occurred in 1918-1921. Simko, the son of a Kurdish chieftain, revolted against Tehran. Simko assassinated the Assyrian Patriarch in the Iranian province West Azerbaijan and carried out massacres of the local Assyrians.

⁶¹"Turkey Kurd Rebels Seek Ceasefire in Northern Iraq," *Reuter* (6:13 AM Eastern Time, 28 September 1998).

He was aligned with Turkey against the Assyrian and other minority inhabitants of the West Azerbaijan. His revolt against Iran can be described as personally motivated. Simko revolted because an Iranian official had executed his brother. The second Kurdish revolt in Iran was the Mahabad Republic revolt. This republic was a Soviet-sponsored Kurdish state in West Azerbaijan which has a Kurdish plurality despite its name. With the withdrawal of Soviet troops from Iran, this state collapsed under Iranian attacks. Since the Mahabad Republic revolt, the Iranian branch of the KDP has been attempting to form an autonomous region in Iran. Iran has not agreed, and the Iranian KDP remains at odds with Tehran. Iran assassinated the party's two leaders and garrisoned its Kurdish areas.⁶² Iran prohibits the teaching of Kurdish, but it broadcasts in the Kurdish language. Like Turkey and Iraq, Iran's Kurdish problem is a question of national and religious identity instead of a hydraulic issue.

THE KURDS AND SYRIA

Syria may harbor as many as a million Kurds. Their numbers are unknown. Syrian governments have shifted from repression to tolerance and *vice versa*. At any rate, it is clear that the Kurds of Syria have not revolted since the establishment of Syria in 1918. The current regime in Syria is friendly toward the Kurds since its leadership is drawn from another minority community and because it views the Kurds as a non-threat toward the independence and integrity of the country.⁶³

⁶²Kurdish Democratic Party -- Iran, "Statement of the Political Bureau of the Kurdish Democratic Party of Iran," (5 August 1996), <<http://www.hartford-hwp.com/archives/51/055.html>>, accessed 28 September 1998.

⁶³Chaliand, *The Kurdish Tragedy*, pp. 84-88.

IRAQ INVADES IRAN

The Kurds have long suffered as pawns in the frequent confrontation between Iraq and Iran. One arena for this confrontation has been the Shatt al-Arab waterway separating the two countries. For Thomas Naff and Ruth Matson, the Shatt al-Arab dispute is a "symptom" of the confrontation between these two powers. Like the dispute between Syria and Turkey, the Kurds were used by one to harm the other. The dispute was not over water consumption rights but over the location of the border. Iran favored the *thalweg* (the river's midpoint) as the border. Iraq favored marking the border at the river's east bank. For Naff and Matson, this dispute was not a cause of the war. According to Naff and Matson, the Shah had aided the Barzanis during the 1970s to force Iraq to accept Iran's claim, but the Shatt al-Arab dispute itself was about more than control over the waterway.⁶⁴ Aside from disputes over Shatt al-Arab, several other causes of the war are often cited. The first explanation of the war attributes its causes to the deep cultural, social, and political cleavages between Iran and the Iraqi leadership: Indo-European/Persian versus Semitic/Arab, *Shiite* versus *Sunni*, fundamentalist versus secular,⁶⁵ and to these opposites we may now safely add semi-democratic versus totalitarian. A second explanation for the war centers around the personality of Saddam Hussein. Saddam's desire for the leadership of the Arab World, his instability and vainglory are described as a cause of the war.⁶⁶ A third explanation for the Iran-Iraq war

⁶⁴Naff and Matson, *Water in the Middle East*, pp. 101-111.

⁶⁵Stephen R. Grummon, *The Iran-Iraq War: Islam Embattled*, The Washington Papers 92 (Westport, Conn.: Praeger Publishers, 1982), pp. 1-2.

⁶⁶Samir al-Khalil, *The Republic of Fear: The Politics of Modern Iraq* (Berkeley, Calif.: University of California Press, 1989), p. 272.

draws inspiration from pure realism. Iran was weakened by revolution, and Iraq took advantage of a rare opportunity.⁶⁷ Another explanation, a "critical approach," focuses on the internal dynamics of both states at the time. Iran's ruling clerics are said to have been in need of consolidating their authority and Iraq was in search of an external war to stabilize itself internally.⁶⁸

There is another school that attributes the cause of the war to Iran's attempts to export revolution, especially to Iraq. There is some element of truth in this, because all revolutionary governments seek outside validation in the form of foreign states adopting their new systems. Nevertheless, Iran's actions in this regard came clearly after Iraq began expelling its citizens of Persian descent to Iran and after Saddam's army and air force began shelling and bombing Iranian villages along the border.⁶⁹ Consequently placing most of the blame for the war on Iran cannot withstand the simplest objective scrutiny, because Iraq initiated the war and proceeded to conquer and occupy a vast tract of territory inside Iran until it was expelled by the Iranian army. It is unquestionable that Iran called for the overthrow of Saddam Hussein and invited the *Shiites* of Iraq to revolt, but these moves were partially in retaliation to Iraqi actions. Furthermore, Iranian war propaganda clearly targeted Saddam Hussein himself. For example, he was called an apostate and nicknamed *Saddam-Yazid*; Yazid was a *Ummayyad* Caliph who brutally put

⁶⁷Shahram Chubin, "Iran and the War: From Stalemate to Ceasefire," in Hans W. Maull and Otto Pick, eds., *The Gulf War: Regional and International Dimensions* (London: Pinter Publishers, 1989), p. 6.

⁶⁸W. T. Workman, *The Social Origins of the Iran-Iraq War* (Boulder, Colo.: Lynne Reiner, 1994), pp. 25-26.

⁶⁹Naff and Matson, *Water in the Middle East*, p. 110.

down a *Shiite* revolt in the 8th century. That Iraq initiated the conflict is beyond debate. Attempts to interpret history to paint Iran as the aggressor, by segmenting the conflict into two separate wars or emphasizing Iran's propaganda efforts, are motivated by an agenda hostile to Iran.

Iraq's behavior is a clearer lens for understanding the war than all other approaches because it lets that country's leadership pass judgment on itself through its own actions. First, Iraq was clearly seeking to enlarge its territory and take over Iran's oil fields, because its army did not stop at the eastern bank of Shatt al-Arab. Its troops occupied virtually all of the oil-rich Iranian province of Khuzistan up to the edge of the Zagros mountain range. Second, there was attempt to push up the Zagros to conquer the rest of Kharun River and Iraq's operations in the Iranian Tigris tributaries region remained a sideshow throughout the war. This suggests that securing water, including Shatt al-Arab, was not on Iraq's agenda as a war aim. Third, Iraq attempted to mobilize the Arabs of Khuzistan against Iran. The province was renamed Arabistan and a flag, based on the Iraqi banner, was created for the region. This suggests that the war had an ethnic or cultural dimension for Iraq. For the Khuzistani Arabs, Iraq's attempts to woo them over were unacceptable. Fourth, Iraq has used chemical weapons against the Iranians as well as the Kurds. The use of these weapons suggests that the Iraqi regime views its non-Arab opponents in sub-human terms. Fifth, the Iraqi name for the war is *Qadisiyat Saddam*.⁷⁰ Contrary to the obvious and apparent significance of this term, the operative term is *Qadisiyat* and not Saddam. *Al-Qadisiya* was the critical battle in

⁷⁰Marion Farouk-Sluglett and Peter Sluglett, *Iraq Since 1958: From Revolution to Dictatorship* (London: Kegan Paul International, 1987), p. 263.

Mesopotamia between the invading Arab Muslims and the armies of the Persian Sassanian Empire during the 7th century. The defeat of the Sassanian Persians in that battle opened Iran to Islamic conquest and effectively buried Iranian civilization, as an independent source of identity, for centuries until the Safavid revival during the Middle Ages. Use of this name suggests that Persians are inferior to Arabs in martial matters. To be fair, Iranians have their own negative opinions of the Arabs, but these stereotypes have not led the country down the path followed by Iraq.

A larger, perhaps more sophisticated, form of this argument is advanced by R.K. Ramazani, an American analyst of Iranian origin. According to Ramazani, the Arab world and Iran have been engaging in a Cold War. For Ramazani, the engine behind the Arab side in this Cold War was Saudi Arabia, but he discusses Iraq's role in the conflict at length. Iran was attacked because Khomeini was attempting to appeal to a larger all-Islamic civilization rather than a Shiite civilization. Khomeini was calling all Iraqis, of all Islamic backgrounds, to depose Saddam Hussein and the secular state he led in favor an Islamic Union. Saddam Hussein and the Sunni Arabs of Iraq were interested in retaining their Iraqi dominion, and the best defense was to attack Iran. Iraq's leader hoped that the Iranian Arabs of Khuzistan would revolt and destroy the Iranian state along with it Khomeini's Islamic regime. Iran offered Saddam and his ruling Takriti clan an attractive target. They could justify their continued rule by painting Persians as a threat to Arab civilization in general.⁷¹

⁷¹R.K. Ramazani, "The Arab-Iranian Conflict: The Ideological Dimensions," in Hafiz Malik, ed., *International Security in Southwest Asia* (New York: Praeger, 1984), pp. 56-61.

Finally, it is important to remember that Iran did not and does not withhold either Kharun or Tigris tributary waters from Iraq. Iran simply wants the right to navigate the Shatt al-Arab as an international river on the basis of a *thalweg* border, and this demand had some merit in the treaties governing borders and frontiers including the 1937 Boundary Treaty and the 1975 Algiers accord.⁷² At any rate, the Shatt al-Arab dispute was not beyond resolution at the negotiating table and a war was certainly not necessary to resolve it. First to suffer from the Iran-Iraq war, of course, were the ordinary people of Iraq as their sons died, their fields withered and their treasury bled for French *Super-Étendards* and *Exocet* missiles instead of efficient Israeli and American drip irrigation systems and education on ecologically sustainable agriculture.

In short, the Iran-Iraq war was caused by the Iraqi government's greed, inhumanity, bigotry and prejudice--in that order. Given the history of the Persian Gulf since 1988, this assessment is factual and cannot be dismissed as a declaration of normative preferences. Operation Desert Storm cannot be included in this discussion, because it was primarily about the liberation of Kuwait, which is effectively outside the Tigris-Euphrates basin.

IDENTITY

Nevertheless, Operation Desert Storm can be described as a conflict over national identity. Iraq was asserting that Kuwaitis were identical with Iraqis, and thus unworthy of a separate state; of course, Kuwait's vast oil deposits were probably more important from Saddam's perspective. The discussion in the section on conflict shows that most

⁷²Naff and Matson, *Water in the Middle East*, pp. 108-110.

wars in the basin were about the Kurds' desire for independence. The only exceptions have been the Arab Revolt and the Iran-Iraq war, which were also infused with vast elements of national identity-based arguments and perceptions. Water does not enter the picture, and the region's nation states have traditionally fought over issues of national identity, territory, oil and power. Of these factors, the factor of national identity seems to have been extremely important.

TURKEY

Conflicts between various peoples seed the national identities of each with suspicion, hostility, and mistrust. Indeed, the genius of American foreign policy has really been about preventing this eventuality in Europe. America's presence in Europe and its inclusion of the Federal Republic of Germany prevented the demonization of that country in the rest of Western Europe, particularly after the reconstruction and the revitalization of the West German economy. Unfortunately, Turkey's conflicts have not seen such a resolution. Turkey's conflicts with Greece and Armenia have resulted in an "other" status for the Turks in the national identities of these two nations and vice versa. But, these two states are outside the Tigris-Euphrates basin, so Turkey's view of the Arabs and its self-identification is far more important for this endeavor.

Turkey's view of the Arabs remains infused with perceptions left-over from World War I. According Turkish scholar, Meltem Müftüler, "the Arabs are perceived as traitors by the Turkish people."⁷³ American analysts Graham Fuller, Ian Lesser, Paul Henze and J. F. Brown, explain the hostility between Turkey and the Arabs in more detail. Lesser and Fuller were writing at a period when the potential for a Turkish-

⁷³Müftüler, *Turkey in the Middle East*, p. 6.

centered integrated Middle East seemed to be over the horizon thanks to late Turkish President Turgut Ozal's "neo-Ottomanism," so they assumed that these problems were "historical." But as Müftüler argues, these problems are not historical. They continue to influence Turkish-Arab relations. Despite their pro-Turkish preferences, Lesser and Fuller note that the Arabs are spoken about in inferior terms. They also notice that Turkey's sense of national identity is tied to rejecting the Arabs.

Other historical reasons supported this aloofness from the Turkish point of view:

- Turkish anger at the Arab populations that had rebelled against Ottoman Turkey (traitors to empire) during World War I.
- A Turkish desire to disassociate itself from former non-Turkish parts of the Ottoman Empire and especially from the Arab world, which so powerfully symbolized the Islamic heritage Atatürk sought to reject.
- Turkish border disputes with Syria in which Syria enjoyed the support of most Arab countries.
- Turkish rejection of Arab state radicalism that was implicitly anti-Western and gravitated toward the Soviet Union – Turkey's geostrategic threat.
- A general, negative Turkish reaction towards Arabs. While Turkish intellectuals speak knowledgeably and rationally about most places, when talk turns to the Arab world, a high proportion of them have recourse to visceral and almost racial denigration in stereotyping Arabs as "dirty," "lazy" and "untrustworthy." This emotionalism is stronger against any other nationality except perhaps the Greeks. In part it reflects Turkey's visceral desire not to be associated in any way with anything Middle Eastern. The researcher who says he is in Turkey to study the Middle East is quickly informed that he is in the wrong place.⁷⁴

By placing the anti-Arab attitudes in the bottom of the reasons for problems between Turks and Arabs, Fuller and Lesser desire to de-emphasize the domestic sources of Turco-Arab friction. Unfortunately, they miss their own point. Without some level of trust and mutual respect between Arabs and Turks, water disputes cannot be resolved,

⁷⁴Fuller, Lesser, Henze and Brown, *Turkey's New Geopolitics*, pp. 50-51.

borders (especially those imposed by the French) cannot be accepted, and Turkish aspirations for regional leadership cannot be realized. The Arabs, especially the Syrians, have also demonized Turkey, rendering cooperative behavior nearly impossible. As Lesser and Fuller illustrate, Turkey's problem's with the rest of the Middle East stem from its own internal identity crisis. As shown in an earlier section, the country's Kurdish population is, to a large extent, challenging the notion of "Turkey" on the basis of its own identity. Hardline secular Turks are at odds with religious Turks, and religious Sunni Turks are at odds with religious Alevi Turks. Indeed, Samuel Huntington has called Turkey a "torn" country and placed in a category of countries that are shared by more than one civilization.⁷⁵

It is not an exaggeration to say that Atatürk sought to destroy Islamic civilization in Turkey. A massive wave of religious reforms began in 1924 with the aim of westernizing Turkey. These reforms did not achieve their aim of secularizing Turkey, but they did manage to put it in a "pandora's box" that broke open after the end of the Cold War according to Meltem Müftüler. The reforms included the abolition of the Islamic office of the Caliphate in 1924, the replacement of the Arabic alphabet and dozens of other practices that tied Turkey to the Muslim World.

The ultimate aim of the new republic was "to elevate Turkey to the level of contemporary civilization" which of course was the West. Thus all links with the Middle Eastern culture such as the Arab[ic] alphabet, the Islamic calendar, the Islamic dress code, and the *seriat* law were eliminated. The assumption was that the ideal Turk was to be European in outlook, and Turkey's place was among the European states. The transformation of the society into a European one was imposed from above, the traditional tendencies which favor close links with Middle

⁷⁵Samuel Huntington, "The Clash of Civilizations," *Foreign Affairs*, Vol. 72, No. 3 (1993), p. 42.

Eastern states and preserving the Islamic identity of the state were repressed. The formulation of a modern Turkish identity was partly the reason for the move away from the Middle Eastern character of Turkey. The traditionalist elements of the Turkish identity were closely sealed in a Pandora's box which opened at end of the Cold War.⁷⁶

The now-banned Islamic Welfare (*Refah*) party and its success at the polls revealed that Turkey is indeed a Muslim country, despite Atatürk's efforts to suppress the Islamic component of Turkish life. The Turkish army effectively banned the Welfare party, and the repression of Islamic life continues in Turkey today with bans over the wearing of Islamic clothing and informal barriers in army and bureaucracy preventing non-secular Turks from high office. The 27 March 1994 elections revealed the power of Islamic traditionalists in Turkey, and the Welfare party showed that it is the largest party in the country. By 28 June 1996, Welfare party leader Necmettin Erbakan became Turkish Prime Minister. The Turkish military began a campaign to remove the democratically elected leader of Turkey from office and he was forced to resign on 11 June 1997. The military banned religious schools and initiated countless measures against Turkey's various Islamic movements. Erbakan had favored normalizing Turkey's relations with its Islamic neighbors including Iran, Iraq and Syria. For example, he suggested that the army's accusations against Syria were Western propaganda designed to sour relations between two Muslim countries.⁷⁷ The Army, on the other hand, desired a military alliance with Israel against "no one." For Turkish analyst M. Hakan Yavuz, the alliance with Israel was a way for Turkey's secular elites to illustrate to Europe and the United States that Turkey was not "Muslim," thus deserving of inclusion in

⁷⁶Müftüler, *Turkey in the Middle East*, p. 7.

⁷⁷Olson, "Turkey-Syria Tensions," p. 183.

"contemporary civilization." Unfortunately, the repression of Islamic parties attempting to achieve power through democratic, non-revolutionary means further isolated the ruling European-oriented Turkish elites from the vast majority of Muslim Turks. In addition, the repression further stained Turkey's miserable human rights record in the West. The alliance with Israel further divided the ruling dominant secular minority in Turkey from the vast masses of practicing Turkish Muslims.⁷⁸

With an Islamist government, Turkey may have been able to solve some of its problems with its neighbors. Erbakan was implicitly offering the Kurds a change in the basis of citizenship and belonging in Turkey from ethnic lines to religious lines but his efforts were seen as a mortal threat to Turkey by the Army, the Alevis and the secular elites. About 25 percent of Turkey's inhabitants are Alevis (the Turkish branch of the Syrian Alawites). Like their Syrian co-religionists, Turkish Alevis practice a heterodox form of Islam. During a 1993 Alevi festival in Sivas (the old Sabastea), an Alevi intellectual denied the authority of the Qu'ran. In a rapid response, Sunni zealots burned down the hotel headquarters of the festival. In the aftermath of the attack, 80 percent of Sivas' Sunni inhabitants voted for parties, including the Welfare party, that supported the arsonists. Nowadays, the Alevis have the support of the army and the secular political establishments and their houses of worship have been allowed to openly spring up in Turkey's cities for the first time.⁷⁹ Nevertheless, the improved position of Alevis in

⁷⁸M. Hakan Yavuz, "Turkish-Israeli Relations Through the Lens of the Turkish identity debate," *Journal of Palestine Studies* (Autumn 1997), pp. 22-38.

⁷⁹*The Economist*, "Two Islams Clash: Despite Turkey's Officially Secular Character, Strife Among its Different Religious Traditions Can Be Deadly," Vol. 347, No. 8054 (25 April 1998), pp.54-55.

Turkey has not led to improvements with Alawite Syria. Perhaps the reason lies in history. Many secular nationalist Turks also remember that the Arabs massacred Turks in Hijaz and Yemen during the Arab revolt. These massacres took place probably as retaliation for Jamal's policies in Syria proper, but they included the destruction of not just soldiers and administrators but whole unarmed civilian families. Unfortunately, their extent is not clear.⁸⁰ The hostility felt by secular Turks to Arabs can be summed up in the words placed on the Ataturk dam facing Syria – "Happy is he who can say that he is a Turk." The statement has several implications. First, it implies that those who cannot say that they are Turks are, or perhaps ought to be made, unhappy. Second, it implies that the very survival of Syria and Iraq is contrary to Turkish interests. These Arab states are to be denied water, the source of life, because their inhabitants are not Turks. Finally, it is a direct affront to Islamic law which enjoins the sharing of water resources. In short, it is a superb summary of Turkish elites' attitudes not only towards Arabs but towards Turkey's own history and heritage.

SYRIA

Among the Arab states with the possible exception of Jordan, Syria is probably the Arab state that owes most of its existence to the Arab revolt. Consequently, it has been the focus of a very high degree of Turkey's ire. Aside from Israel, which lies outside this effort, Syria has had difficulties with both Turkey and Iraq, but for very different reasons. Syria's non-hydraulic problems with Turkey include Alexandretta (or Hatay), Turkey's "desertion" of the Middle East, its alliance with the West, and its

⁸⁰Discussions with Radwan Al-Said, Instructor of Arabic, University of Chicago (Summer 1995).

alliance with Israel. Centuries of Turkish domination of Syria add elements of distrust and hostility to the relationship. In addition, the reign of *Jamal Pasha* certainly continues to feed dark visions in Syria regarding Turkey's intentions. Representing a pro-Turkish perspective, Lesser and Fuller nevertheless capture the essence of the Arabs' hostility to Turkey:

- Turkey has had a long history of rule in the regions: Turks have been conquerors and administrators of empireS in diverse places nearly from their first appearance on the stage of world history. Persians and Arabs, on the other hand, over the last millennium have generally been the ruled, rather than the rulers, dominated either by Turks or by Western imperialist states. This has had an important psychological impact on their sense of "victimization" in history.
- Since attaining its complete independence as a new nation-state in the 1920s, Turkey has no longer been threatened by Western Europe (except for the general danger of fascism to all of Europe before World War II). Most Arab states continued to languish under colonialism and imperialism until well after World War II, and in the Persian Gulf until as late as the 1970s; various Arab states have also suffered from Western armed intervention in one sense or another right down to the Gulf War of 1991. Turkey has not suffered this fate.
- Turkey has been immediately threatened over the centuries by Russian power, both Czarist and Bolshevik. As a result, Turkey joined with the West to protect itself. A direct Soviet threat to the Arab world was always minimal (although there was often a significant proxy threat from radical Soviet client states). Indeed, actual armed attack on the Arab states came consistently and solely from the West itself.
- The creation of Israel, supported fully by the West, was a direct threat to the Arab world, both in terms of territory lost and the resulting armed conflicts in which the Arabs invariably lost. Israel posed no such direct problem to Turkey.
- Whereas the Arab world provided a natural network of alignments among the Arab states, Turkey had no "natural" allies in terms of states consistently close to Turkey or sharing close ethnic or other cultural values. Turkey was "on its own" and more inclined to look further afield for its political associations either to the equally isolated Northern Tier States or to the West.

- Because Turkey had aligned itself with the West, it naturally fell afoul of most of its Arab neighbors, who perceived Ankara as serving interests directly hostile to many of the general interests of the Arabs. This conflict of interests tended to perpetuate and reinforce itself over decades.⁸¹

In addition to these problems, Syria and Turkey also have an on-going dispute over the province of Hatay or Alexandretta. Until 1938, this small Syrian Mediterranean province had an Alawite Arab and Armenian majority. That year, the Turkish army moved in with French approval and expelled most of the province's Alawite Arabs and Armenians. A rigged referendum followed in 1939, and the province was annexed to Turkey. Independent Syria has never recognized the loss of Alexandretta and it is supported in its claims by all Arab states.⁸² It has recently become apparent, that France may have given into Turkish blackmail. Turkey was threatening to join the axis against France, and France was anxious to keep Turkey out of the war, so it paid for peace with Syrian land.⁸³

Like Turkey, Syria is a multi-ethnic, multi-religious country. Ten percent of its population is not Arab. The non-Arab communities include Kurds, Armenians, Circassians (Cherkess, Chechens and other Muslim peoples from the North Caucasus), Turkmen, Assyrians, Turks and until very recently, a few thousand Jews. Most of Syria's Jews departed recently to Israel and the United States without the level of problems that accompanied the departure of the Jewish community from Iraq.

⁸¹Fuller, Lesser, Henze and Brown, pp. 49-50.

⁸²Robert D. Kaplan, "Identity Crisis," *The Atlantic*, Vol. 271, No. 2 (February 1993), pp. 22-26.

⁸³Olson, "Turkey-Syria Tensions," p. 169.

Religiously, Syria is even more divided. Seventy percent of the population is Sunni. The remaining 30 percent includes Alawites (12 percent), Christians (10 percent), Druze (3 percent), Ismailis (1 percent) and others. In addition, Syria has a vast, predominantly Christian, overseas community with varying degrees of attachment to their ancestral homeland, including well-known figures such as Argentine president Carlos Menem and Mexican Hollywood actress Selma Hayek. The Sunnis, the Alawites and the Druze are concentrated in well-defined locations in the country. The Sunnis dominate Damascus and its environs and other large cities in the old biblical Aram. In 1980 and 1982, the Sunnis revolted under the leadership of various fundamentalist elements. When the city of Aleppo revolted in 1980, the revolt was suppressed by the Alawite-led army. In 1982, the city of Hama revolted. Assad ordered not only the revolt's suppression, but the destruction of a section the historic old town and the death of many of its citizens.⁸⁴

The Druze avoided conflict in Syria by aligning themselves with the Ismailis and the Alawites. The Druze dominate a small region near the Jordanian and Israeli border called Jebel al-Druze. The Alawites dominate the coastal region of Syria. Their religion combines Shiite Islam with Phoenician Paganism, Christianity and the cult of Mithras. Wine and bread are used in religious ceremonies, and Christian celebrations such as Christmas and Easter are practiced. Naturally, this is a rather unusual combination in the Middle East, and the Alawites (and their Turkish Alevi cousins) have traditionally been regarded as little better, and sometimes worse, than Pagans by the Sunni majority. Indeed, the rise of an Alawite Syrian Air Force officer, Hafiz Al-Assad, to power is

⁸⁴ Itamar Rabinovich, "Stability and Change in Syria," in Robert B. Satloff, ed., *The Politics of Change in the Middle East* (Boulder, Colo.: Westview Press, 1993), pp. 13-15.

surreal within a Syrian context, because the Alawites were on the bottom of Syria's pecking order. According to Robert Kaplan, Daniel Pipes compares the rise of Assad to power in Syria to the enthronement of an untouchable Maharajah in India or the coronation of a Jewish Tsar in Russia. The force behind the rise of the Alawites was the military. By 1961, they had become a majority within the Syrian Army's officer corps, and they quickly took advantage of their new position of power. The Alawites quickly moved to end the two-year-old union of Egypt and Syria, because they felt that their interests were not served by alignment with predominantly Sunni Egypt.⁸⁵

Kaplan echoes Pipes' prediction that a post-Assad Syria would collapse. This question is debatable. But, it is clear that Syria's wars with Israel and hostilities with Turkey provide justification for the repression of the Sunni majority in Damascus, Hama and Hums (the old Biblical Aram). Pipes and Kaplan argue that Syria will collapse into three or four states after Assad dies. On one hand, such projections and prophecies are very questionable. If Syria were prone to this sort of collapse, these cleavages would have already been exploited by Turkey, Israel, Iraq, Jordan and even the Maronite Lebanese parties opposed to Syria. On the other hand, perhaps Kaplan and Pipes are correct in stressing Assad's Machiavellian skills. In addition to the persuasive powers of his secret police and Republican Guard, Assad used Turkey and Israel as the "others" around which all Syrians can unite. He also cleverly and subtly called his subjects "the descendants of the Ummayyads" in order to create and foster a national identity of sorts

⁸⁵Kaplan, "Identity Crisis," pp. 22-26. A more appropriate term for Syrian Alawites may be Nusayiris. Nuysair is said to have introduced the religion to Arabic speaking peoples. To learn about the differences between Turkey's Turkish and Kurdish Alevis and the Syrian Arab Alawites, see the sections on religion in Mehrdad R. Izady, *The Kurds: A Concise Handbook* (Washington, D.C.: Crane Russak, 1992).

that avoids direct religious or ethnic connotations. Syria is also the only Arab country which does not list the religion of its citizens in their official papers, perhaps out of an Alawite desire for self-protection in event of a Sunni revolution. Despite the tortured history of his own sect, Assad was not above reaching out to Sunni clerics to purchase support for his rule.⁸⁶ This approach is not practiced in Iraq. It remains to be seen whether Syria will collapse under his son's rule.

Sunni-dominated Iraq has been a third "other" in Syria's discourse. Syria and Iraq have had extremely bitter relations, even before their independence from France and Britain. Conflict between Damascene political parties and Baghdad and Mosul based Arab organizations began even before "Syria" and "Iraq" existed as clearly separate entities after the collapse of Ottoman power. The Arab troops that liberated Damascus and the Levant from Ottoman rule were led by officers from Iraq and soldiers from the Hijaz and the Trans-Jordan. Unfortunately, they were resented almost immediately by both the Syrian population and by the Lebanese Christians.⁸⁷ Today, this quarrel finds its expression in the vicious conflict between the Syrian and Iraqi branches of the Ba'ath party. In 1966, the party split into two, and the old leadership (Michel Aflaq and Salah al-din Bitar) took shelter in Iraq. Aflaq continued as the figurehead leader of the Iraqi Ba'ath, and Bitar left political life. The Syrian Baath and the Iraqi Baath derive their respective legitimacies from demonizing each other. But the need to initiate a split can be understood only on a identity level, and this issue is discussed near the conclusion of the

⁸⁶Itamar Rabinovich, "Stability and Change," pp. 13-14.

⁸⁷Eliezer Tauber, *The Formation of Modern Syria and Iraq* (Portland, Ore.: Frank Cass, 1995).

section on Iraq's national identity. While there have been thaws in the relationship between the two countries, including a recent visit by the Syrian Health Minister to Iraq, the relationship is likely to be strained until the Baath is no longer an issue in one of these two countries.⁸⁸

IRAQ

In many ways, Iraq was born doomed. Imperial Britain created Iraq out of three mutually antagonistic regions – Mosul, Baghdad, and Basra. Each of these three regions was (and to a large extent continues to be) dominated by a major ethnic/religious group. Mosul, in Northern Iraq, is a Kurdish-majority region. Britain defeated a Kurdish chieftain attempting independence there and secured the province for Iraq in order to insure oil supplies for its client state, but status of the region was not settled until 1926 when Turkey, Britain and Iraq signed a treaty assigning the territory to Iraq. Central Iraq is dominated by Sunni Arabs who have traditionally provided the leadership of the country. Finally, Southern Iraq is inhabited by Shiite Arabs who have traditionally looked towards Iran for spiritual, if not ethnic, belonging. Shiites number somewhere between 55 and 65 percent of the population. Kurds are about 20 percent of the population. Arab Shiites number some 13-15 percent of the population.⁸⁹

Virtually all the Kurds are at least nominally Sunni in Iraq. In addition to these three large groups, Iraq has some 500,000 Turkmen, virtually every minority group found in Syria, and a few unique local minorities like the Christian Chaldeans – the community

⁸⁸*Arabic News* (30 March 1998) <<http://www.arabicnews.com>>, accessed 28 June 1998; Farouk-Sluglett and Sluglett, *Iraq Since 1958*, pp. 200-205.

⁸⁹The Central Intelligence Agency, *World Factbook* 1997.

from which Tariq Aziz is drawn.⁹⁰ Until the forties, Iraq also had a large Jewish community of some 100,000-300,000 persons. Aside from becoming a source of unimaginable wealth for ruling groups, the state of Iraq has not been a positive influence on these various communities. Saddam's brutal treatment of the Kurds is widely known, but he is not alone among modern Iraq's leaders in brutalizing the Kurds. Earlier Sunni governments, both Baath and non-Baath, have mistreated the Kurds. Saddam simply took earlier policies to a new low. Under his rule, Iraq has used poison gas on its Kurdish citizens and Iranian troops at the Kurdish town of Halabaja after the town fell to Iranian troops assisted by Kurdish paramilitaries in September 1987. The sight of thousands of dead men, women and children revealed the true demonic nature of the Iraqi government.⁹¹ Like the Kurds, the Iraqi Shi'ite Arabs have seen their religious leaders killed and exiled, their secular leaders marginalized, and their population as a whole de-emancipated by the dominant Arab Sunni political leadership. The leading Shi'ite cleric and the probable national spokesman for the country's majority community, Muhammed Baqir al-Sadr, was executed by Saddam's Baath on 9 April 1979, along with his sister Bint Huda. So effective were these and other executions that no visible national leadership for Iraq's Shi'ite majority has emerged since al-Sadr's departure, despite the post-war Shi'ite revolt in Southern Iraq.⁹² The Sunni leadership, of course, includes Saddam's Takriti elites, who were and still are Ottoman in outlook and policy, especially when the object of these outlooks and policies are Kurds and Shi'ites--whether Iraqis or

⁹⁰Metz, ed., *Iraq*, < <http://lcweb2.loc.gov/frd/cs/cshome.html> >.

⁹¹Chaliand, *The Kurdish Tragedy*, pp. 70-72.

⁹²Farouk-Sluglett and Sluglett, *Iraq Since 1958*, pp. 199-200.

Iranians.⁹³ The roots of this unusual tilt towards Turkey, episodically manifested through Iraq's alliance with Turkey in CENTO and the Baghdad Pact, its occasional tacit approval of Turkish operations against the PKK, and a water policy that partially conforms to Turkey's policies are very old:

Iraqi youths, born in the 1880s and the early 1890s, who had left Iraq during the last years of Sultan Abd al-Hamid II or in the period of the Young Turks in order to enter the military academy in Istanbul, who had served as officers during World War I in the Ottoman army or in the Arab Revolt army, and who had thereafter filled senior positions in the short-lived Syrian state of Faysal, had returned to Iraq. The circle was closed. They were now to become the ruling establishment of Iraq during the rule of [Faisal] and afterwards, for almost two decades.⁹⁴

The 1958 *coup d'état* did not replace the attitudes that these men brought back with them to Iraq. True enough, they were swept from power, but they had selected, trained, and built the bureaucracy with British help. It was a neo-Ottoman bureaucracy in many ways, with one significant exception. Before its rapid descent into the chaos and insanity of World War I, the Ottoman Empire's bureaucracy was multi-ethnic and multi-religious. In contrast, this Iraqi bureaucracy was drawn from the officers' own community, and the "revolution" did not change this reality⁹⁵ – in fact it entrenched it further, especially after the execution of Qasim (who was, after all of religiously mixed parentage) by the Baath in 1963. The Baath was overthrown shortly afterwards, but it returned in an even more virulent form in 1968..

⁹³Abbas Kelidar, "A Quest for Identity," *Middle Eastern Studies*, Vol. 33, No. 2 (April 1997), pp. 413-414.

⁹⁴Tauber, *The Formation of Modern Syria and Iraq*, p. 324.

⁹⁵ Farouk-Sluglett and Sluglett, *Iraq Since 1958*, p. 5.

But the brutality of this Baathist Sunni ruling group did not and does not stop with the two largest components of the country's population. The Jewish community was among the mid-sized to smaller communities in the country at the time of Iraq's creation. At a time when Iraq's population was much smaller, it numbered somewhere between 100,000-300,000 making it a significant player in Iraqi life, especially because it was concentrated in Baghdad. The troubles started in 1933 when the Assyrian Christians became the victims of an Army campaign designed to thin their numbers and to destroy their military power. This massacre was not the first and unfortunately not the last, and it would not be an exaggeration to say that the repression of the Assyrians continues to this day.⁹⁶ It foreshadowed the pogroms the Jewish community was to suffer a few years later. A few months after the massacre, Faisal, the founding king of Iraq, died. Iraq's future probably died with him. Faisal had tried to strike a balance in order to insure the survival of the country and its various communities including the Jewish community. Between 1921 and 1948, including the whole of Faisal's rule, Iraq intervened in Palestine to protect the interests of the Palestinian Arabs but the word "Palestine" was mentioned only three times in order to prevent the seepage of the dispute into Iraqi internal politics and to avoid complicating relation with Britain. Indeed, the instances in which Palestine is mentioned took place between 1946 and 1948. Faisal's record reign was not perfect, but his death marked the end of all realistic hope for a peaceful Iraq.⁹⁷

⁹⁶Assyrian International News Agency, *Genocides Against the Assyrian Nation* (1989), <<http://aina.org/martyr.htm#August 4-5, 1933>>. Assyrians are being targeted by the Turkish and Iraqi governments as well as by the PKK, PUK, and the KDP. Their survival, condition and status is severely endangered.

⁹⁷Kelidar, "A Quest for Identity," pp. 414, 422-423.

Faisal's son, Ghazi, became king in 1933. Ghazi was a bigoted admirer of Nazi Germany. With the king turning to Nazi Germany, the position of the Jewish community eroded. Ghazi died in an auto accident in 1939; he was replaced by his infant son Faisal II and two conservative pro-British regents. British influence in the country continued to prevent the country from joining the Axis until 1941. In 1941, a *coup d'etat* brought a pro-Nazi party to power, and Britain (from Palestine and the Trans-Jordan) and British India (from the Persian Gulf) sent armies to restore the empire's clients to power. But on the orders of the British Ambassador, Sir Kinahan Comwallis, the Anglo-Indian armies and the Trans-Jordanian Arab legion did not enter the center of Baghdad for several days, allowing the ragtag remnants of the Iraqi Army's pro-German factions to massacre and kill unarmed Iraqi Jewish civilians in what became known as the *farhud* pogrom. The massacres alarmed the Jewish Agency in Palestine and elsewhere. The agency began arranging for the movement of the Iraqi Jewish community to the forthcoming state of Israel. Young Iraqi Jewish men were trained to set up an alternative Jewish community government within Iraq to arrange for the departure of the Jewish community. With the payment of the appropriate bribes to the appropriate officials and at the cost of abandoning the fruits of two and half millennia of effort, the overwhelming majority of the Jewish community departed in 1948 under conditions that would render the word "expulsion" more appropriate. The Iraqi government, like the others one before it, seized the "abandoned" property of the "emigrants."⁹⁸ Reduced to a small fraction of its former self, the Jewish community continued to suffer. In 1969, Saddam and his mentor, Al-

⁹⁸Elie Kedourie, "Operation Babylon: The Story of the Rescue of the Jews of Iraq," *The New Republic*, Vol. 199, No. 1 (17 October 1988), pp. 48-50.

Bakr, staged a show trial of nine Jewish Iraqis who were later hanged in public for "spying for Israel."⁹⁹

In many ways, the suffering of Iraqi Jews under the minority Sunni Arab government has been an accurate miniature representation of the suffering of all Iraqis outside the ruling circles. Other groups, like the Turkmen also suffered from policies created in Baghdad. These policies include using various Kurdish factions to harass, kill, and otherwise harm the Turkmen perhaps to encourage them to migrate to Turkey. Iraqi Christians have been fleeing Iraq whenever possible despite the presence of Tariq Mikhail Aziz on Saddam's right hand.¹⁰⁰ Properly understood, Iraq is a counter-traditional, modern despotic Sunni Arab state at war first with its own people and second with most of its neighbors who do not share its identity. Indeed, when viewed from the prism of identity, the Syrian-Iraqi split in the Ba'ath makes sense. Religious Sunnis regard the Alawites in extremely lowly terms, but the Alawites rule Sunnis in Syria. The Ba'ath's leadership is drawn heavily from Sunni Arab towns and regions in Iraq that border Sunni-dominated areas within Syria -- the Sunni triangle that includes Takrit. Iraq stood by and watched as Turkey built the GAP project, because Saddam understood that it harmed Syria more. Despite the grave consequences of the GAP for Iraq, which include *losing the Euphrates*, perceived obligations derived from identity mattered more. While Iraq does protest the project, it does not cooperate with Syria in opposing Turkey. To be fair, Assad's Syria is very difficult to cooperate with, but Iraq could have refused to implement a Tigris-based water policy and chosen to diplomatically confront Turkey over

⁹⁹Farouk-Sluglett and Sluglett, *Iraq Since 1958*, pp. 121-122.

¹⁰⁰Kelidar, "A Quest for Identity," p. 414.

the Euphrates instead of wasting 10 years on a war against Iran; after all, it does enjoy the rights of prior-use under international law, according to Kliot. But despite the routine protests every time Turkey invades Northern Iraq, Turkey is not an "other" in Iraq. Turkey restored diplomatic ties with Iraq and has been helping it smuggle oil in contravention of United Nations sanctions.¹⁰¹ On an international plain, Iraq's "others" are Syria and Iran. But, Iraq's biggest "others" are the Iraqi people themselves. As one Old Dominion University Kuwaiti undergraduate student put it, "Iraq is a country that wants to destroy its own people." The contrast with Syria is instructive, because it shows how identity-driven the Iraqi polity really is. Assad curries Sunni clerics while oppressing the Sunnis through the instrument of the secret police and selective elimination except in cases of popular revolt, but Saddam and his Takriti Baath are more comfortable executing Shiite clerics and massacring Kurds *en masse* often with minimal provocation.

IRAN

The West's initial impression of the Shiite clerics who came to power in Iran in 1978 was almost wholly negative. As the Islamic regime evolved in Iran, a new more balanced view is emerging. Given the region, Iran may well be a *relative* "island of stability" in terms of its identity problems and the methods it uses to resolve them. With regard to treatment of non-majority groups, something may have remained from the policy of the Achaemenids of tolerating ethnic and religious differences among their subject peoples. With the exception of the Baha'i community, Iran does not, generally

¹⁰¹ "Turkey Restores Ties with Iraq," *Associated Press* (11:49 EDT 27 September 1998); James Risen, "U.S. Reportedly Ignoring Iraqi Oil Smuggling Along Turkish Border," *The New York Times* (19 June 1998).

speaking, oppress minority faiths as much as its neighbors do. Jews, Assyrians, Armenians and Zoroasterians elect their representatives to the *Majlis* in relatively free elections. Of course, Twelver Shiism is the state faith, so the country would fail a United States style test of separation of Church and State. In addition, Iran is led by a partially-elected clerical leadership so it is the furthest thing from a secular state. In sharp contrast to the 1905 revolution, the revolution of 1978-1979 produced not a liberal regime but a religious half-democracy/half-theocracy. Like Turkey, Iran is torn between secularism and religious politics. But unlike Turkey, Iran's conflict seems to be marked by shifts of the social and political pendulum from one paradigm to the other. Thus, Iran's movements are marked by temporal separation of the two approaches to life. In Turkey, Islamic politics and secular nationalism have had to co-exist and struggle against each other, openly or in private. Ataturk's Turkey simply suppressed the country's Islamic tendency without really replacing it or really marginalizing those who were cautious enough to evade him while practicing their religious beliefs.

The 1905 revolution can be traced back to the infusion of Western ideas into Iran, including rule of law, economic liberty and national independence. Iranian elites were also inspired by the victory of Japan (with its constitutional system) over Russia (an absolute monarchy), and many Iranian intellectuals came to regard constitutions as "the secret" of the West's power. Also, Iran had begun to re-discover its pre-Islamic past at the turn of the century and many Iranian intellectuals were purging Arabic words and Islamic concepts out of Farsi and examining Iran's pre-Islamic history for metaphors and symbols with which to oppose the ruling Qajar dynasty which used Islam to legitimate its

rule.¹⁰² There were also some very unpopular tariffs on the Iranian economy. As a consequence, Iranian reformists, moderate Shiite clerics and merchants of all sorts brought about a revolution that established an Iranian parliament, an Iranian constitution and a legal system. The constitution provided for a measure of free speech and for the security of individuals against the state. The Qajar Shah who signed the constitution on 30 December 1906, died a few days afterwards, and his son was determined to cancel the document and the institutions it created. A civil war broke out between the Shah and the *Majlis*' supporters. The Shah lost, and his minor son was placed under a regency held by a Bakhtiari tribal chieftain. Russian support for the Shah changed the picture, and by 1911, the revolution could be said to have ended. Instability did not end, however, and by 1925 Reza Pahlavi, an army commander, managed to depose the ruling dynasty and replace it with his own family.¹⁰³ Under the new Pahlavi Shah and his son, secularism reached new highs or lows, depending on one's perspective. Reza Pahlavi was removed from the throne by the British and the Russians because of his pro-German stance and replaced by his minor son, Muhammed Reza Pahlavi (*the Shah* desposed in 1978). Later, his son was restored thanks to British and American intervention. Like Ataturk before him, Muhammed Reza Pahlavi, attempted to force his country to pass through "the gate of the great civilization."

¹⁰²Mohamad Tavakoli-Targhi, *The Formation of Two Revolutionary Discourses in Modern Iran: The Constitutional Revolution of 1905-1909 and the Islamic Revolution of 1978-1979* (Chicago: University of Chicago Ph.D. dissertation, 1988).

¹⁰³Nikki R. Keddie and Yann Richard, *Roots of Revolution: An Interpretive History of Modern Iran* (New Haven, Conn.: Yale University Press, 1981), pp. 63-112.

This last Shah owed his very political survival and rise to power to the United States. He was deposed by his Prime Minister, Dr. Muhammad Musaddiq in 1953. The Shah himself told Kermit Roosevelt, the CIA officer who restored him to power, that he attributed his restoration to Britain and the United States. "I owe my throne to God, my people, my army--and to you." Roosevelt adds that the Shah used "you" to mean Roosevelt personally *and* the United Kingdom and the United States.¹⁰⁴ For many Iranians, Muhammad Reza Pahlavi's restoration was a repetition of his ascent of the throne. The Shah was enthroned in 1941 as the puppet of the Allies who had invaded Iran and deposed his pro-German father. The Allies feared an oil-seeking German thrust into Soviet Azerbaijan and the Persian Gulf and could not risk the elder Pahlavi's German leanings.¹⁰⁵ From the beginning, the Shah was seen as a product of Great power intervention in Iranian affairs. The appearance or suspicion of foreign involvement in his restoration did not help his image with the Iranian nationalist-leaning middle class. Back on the throne, the Shah soon set about eliminating all possible sources of opposition, including the generals who helped him recover his throne and royalist-oriented independents in the *Majlis*. In 1957, he established the Information and Security Organization of the Nation (known by its Farsi acronym SAVAK) with CIA assistance and technical support. He also established two puppet political parties in 1957 (the Meliyn) and 1958 (the Mardom) to soak up the Iranians' political ambitions. Pahlavi also established the Royal Inspection Organization, a government organ accountable to the

¹⁰⁴Kermit Roosevelt, *Countercoup: The Struggle for Control of Iran* (New York: McGraw Hill Books, 1979), p. ix.

¹⁰⁵Marvin Zonis, *Majestic Failure* (Chicago: University of Chicago Press, 1991), p. 189.

Shah alone, to supervise all aspects of Iran's government. In 1941, the Shah was puppet-king. By 1960, he was an autocrat.¹⁰⁶

In 1963, he began an ambitious program of social and economic reforms called the "White Revolution." His social reform program targeted the influence of the Iranian clerical class. These reforms included granting women the right to vote, the substitution of the word "Qu'ran" with the words meaning "Holy Book" in the oath of *Majlis* deputies, the replacement of the Islamic calendar with an Imperial one, and the grant of extraterritorial status to U.S. military personnel stationed in Iran and their dependents.¹⁰⁷ These reforms attracted the wrath of Ayatollah Khomeini and his supporters. Accusing the United States of creating the "White Revolution" as part of an anti-Islamic conspiracy and comparing Iran to an American colony, Khomeini complained about the special status of the United States in Iran in an angry speech in Qom:

Even if the Shah himself were to run over a dog belonging to an American, he would be prosecuted. But if an American cook runs over the Shah, the head of state, no one will have the right to interfere with him ... If some American's servant, some cook, assassinates your *marja'* [the highest ranking *Shi'ia* cleric and source of religious authority] in the middle of the bazaar or runs over him, the Iranian people do not have the right to apprehend him.¹⁰⁸

Between June 1963 and January 1964, Khomeini and his students and supporters were imprisoned or under house arrest in Tehran. The Shah allowed Khomeini to

¹⁰⁶Mohsen Milani, *The Making of Revolutionary Iran* (Boulder, Colo.: Westview Press, 1988), pp. 76-79.

¹⁰⁷*Ibid.*, p. 94.

¹⁰⁸Khomeini, Ruhollah, Ayatollah and *Faqih* of Iran, "Speech at Feyziye in Qom," in Hamid Algar, ed. and trans., *Islam and Revolution* (Berkeley, Calif.: Mizan Press, 1981), pp. 181-182.

return to Qom in January, 1964, but the Ayatollah refused to remain silent. Being "a man of the cloth," made Khomeini safer alive as far as the Shah was concerned. Pahlavi did not want to transform the Ayatollah into a martyr, and decided to exile him. By November 1965, the Shah's government finally secured Turkey's hospitality as a host country for Khomeini's exile, a role later played by Iraq and France. In addition to Khomeini's concern about social and moral issues, there was also a reaction against "White Revolution's" land reform provisions that forced religious foundations (*awqaf*) to lease land to sharecroppers at rents beneath their then current rents.¹⁰⁹

The Shah's economic program was of American design. In a letter to Secretary Rusk, the United States ambassador to Iran, J.C. Holmes, describes the "White Revolution" as a program designed to destroy "the political, and to a great extent, the economic power of the traditionally most powerful class of the country and the replacement of this class with a new class of enfranchised peasantry." Holmes then outlines the financial, technical, managerial, and technical assistance that the United States government can offer to Iran in support of the "White Revolution." It is ironic that Holmes correctly argues that the United States is likely to be blamed for the "White Revolution" if American advice is accepted and fails to accomplish the economic, social, and political changes the Shah's goals.¹¹⁰ With the failure of the White Revolution and increasing cultural friction

¹⁰⁹Milani, *The Making of Revolutionary Iran*, pp. 84, 94.

¹¹⁰ J.C. Holmes, "Message from the United States Ambassador in Tehran to the Secretary of State, 15 May 1963," in Yonah Alexander and Allan Nanes, eds., *The United States and Iran: A Documentary History*, (Fredrick, Mary.: Aletheia Books, University

between Americans working in Iran and traditional elements of the society, movement towards religious politics became inevitable. The secular constitutionalism of 1905 was hijacked by the Shah and was tarnished by his association with it. Students, clerics and many middle class people were demanding sexually-segregated facilities, more religion in politics and end to the Shah's westernization program. Students were now using Islam as an argument against the monarchy, because the monarchy had claimed secular, pre-Islamic credentials.¹¹¹ The pendulum between religion and secularism swung back, and a quick bloodbath after the revolution ended the hopes of secularists. Among those executed in the aftermath of the revolution were a few ethnic secessionists from the Turkmen Sahara region and the Azeri-speaking Shi'ite Qash'qai tribe of Southern Iran. The Qash'qai number less than 500,000. Despite the war with Iraq, the secessionists were not able to challenge the authority of Tehran since 1979 to any significant extent. Furthermore, it is clear that their 1979 challenges were of romantic, almost Jacobite nature. For now, Iran is defining its identity in Islamic terms, but there are clear signs that this is changing and softening -- particularly with the election of liberal Ayatollah Khatami as president. Given this history, the leading "other" in the structure of Iran's national identity, "the Great Satan" in the angry oratory of many Iranians, is the United States.

Iran's attitudes towards the Arabs and Turkey are a little more subtle. They are linked with its own internal ethnic and religious dynamics. Like Turkey,

Publications of America, 1980), pp. 349-353.

¹¹¹Keddie and Richard, *Roots of Revolution*, pp. 183-229.

Syria and Iraq, Iran is a multi-ethnic state. It is also a multi-religious state to some extent. The number of Shiites in Iran, however, is probably about 89 percent, so other faiths would be of marginal influence even in democratic setting. Ten percent of the population is Sunni and Jews, Christians, Zoroasterians, Bahais and others make up 1 percent. Iran's ethnic divisions, on the other hand, in remarkable contrast to its relative religious homogeneity. The table below lists the various ethnic communities in Iran. It is important to remember that the two largest groups are Shiite and have both contributed to the leadership of the Islamic Republic.

Table 17: Ethnic and Linguistic Groups in Iran.

Groups (<i>main religions</i>)	Percentage of Population
Indo-European Family	
Persian Group	
- Persians (<i>Shiite, few Zoroasterians, Baha'is</i>)	51%
- Gilaki & Mazandarani (<i>Shiite</i>)	8%
- Lur & Bakhtiari (<i>Shiite</i>)	2%
Kurdish Group (<i>Sunni & Alevi-related sects</i>)	9%
Baloch (Baluch) (<i>Sunni</i>)	1-2%
Armenians (<i>Christian</i>)	Less than 1%
Turkic Family	
Azeri Group (<i>Shiite, few Baha'is</i>)	26%
Turkmen and Turkish (<i>Sunni</i>)	2%
Semitic Family	
Jews (<i>Orthodox Judaism</i>)	Less than 1%
Arabs (<i>Shiite in Khuzistan, Sunni elsewhere</i>)	1%
Assyrians (<i>Christian</i>)	Less than 1%

SOURCE: The Central Intelligence Agency, *World Factbook 1997*. Table adds up to more than 100 percent because of approximations.

The problems of the Kurds in Iran have been discussed to some extent earlier. They are building a national identity of their own, and this brings friction into their relationship with Iran. It remains to be seen whether the softer line adopted by the new Iranian president will extend to the Kurds. The Shah sought integrate the Kurds by emphasizing their "kinship" with Persians through an emphasis on Iran's Indo-European heritage, but with the Islamic Republic, the

emphasis has been on Shiite Islam and Islam more broadly put as a source of unity. Khomeini condemned pan-Iranianism, pan-Arabism and pan-Turanianism. He also branded Saddam Hussein an "apostate" given the latter's Sunni Arab nationalist policies. Khomeini's regime also introduced the notion of "language" as being something distinct from the primary sense of belonging. For him, all that mattered was the religion of the people in question. He re-defined full membership in Iran's national community on the basis of belonging to the Twelver Shiite faith regardless of ethnicity or language. This approach melded well with earlier fusions of Shiite Islam with Iranian nationalism and weakened the centrifugal forces that could have divided Iran.¹¹² For example, Azeri speakers are called "Turkish-speaking Iranians," the group is integrated into the leadership of the country and there are very high rates of intermarriage between Persians and Azeri-speaking Iranians. Finally, the use of the Azeri language is legal in Iran. Iran's overall approach seems to work in terms preventing internal ethnic conflict. When Azerbaijan proper attempted to induce Azeri-speaking Northwestern Iran into union, it was politely given the cold shoulder by the local inhabitants. The Soviets had established a state in the province after World War II, but it collapsed after their withdrawal from Iran. In sharp contrast to Turkey's nationalities policy, Iran's policy is to live with the differences and emphasize

¹¹²Hooshang Amirahmadi and Nader Entessar, in Hooshang Amirahmadi and Nader Entessar, eds., "Iranian-Arab Relations in Transition," *Iran and the Arab World*, (New York: St. Martin's Press, 1993), pp. 2-4.

commonality. The policy results in the erosion of the minority identities.¹¹³

Commonalities that unite the Middle East are the cornerstones of the current Iranian charm offensive in that region. Iran's relationships in the region are somewhat handicapped by its Islamic universalist ideology, especially when dealing with a regime like Syria's.¹¹⁴ Aside from the the Iraqi government, the Baha'i community and Afghanistan's Taliban, Iran's only "other" is the United States. Nevertheless, Iran's recent policies suggest an attempt to bridge the Sunni-Shiite gap, to stabilize its relationships with its neighbors, and move towards normalization with the United States.

Perhaps Iran's advantage stems from the fact that it is the state with the oldest roots in the region. While it is true that Iran did was not reintegrated into its current form until 1501 when the Safavid dynasty imposed itself and its Shiite faith on the country, it clearly has a historical identity in both Islamic and non-Islamic times. It is the one country that does not have unmanageable historical baggage about itself or its immediate neighbors. While it is true that Shiite Islam has not forgotten the death of Ali, his sons, and grandsons on the battlefields of Karabala and Najaf, these reenactment of these events is now mainly a part of the world of ritual and spirituality, even in Iran. Nevertheless, Iran does have some issues to resolve with a distant power renowned for its post-World War II realism.

¹¹³Patricia Carley, *A Conference Report: Turkey's Role in the Middle East* (Washington D.C.: United States Institute of Peace January 1995), pp. 14-15.

¹¹⁴Shireen T. Hunter, "Iran and Syria: From Hostility to Limited Alliance," in Hooshang Amirahmadi and Nader Entessar, eds., *Iran and the Arab World*, (New York: St. Martin's Press, 1993), pp. 198-216.

CONCLUSION

The dispute over the waters of the Tigris-Euphrates basin cannot be solved until the underlying clash of identities is solved. The water dispute complicates, exacerbates and sours a complex array of trans-cultural relations in the region. This array is a direct result of the unresolved difficulties left from World War I. Turkey has never really come to terms with the war or attempted a policy of national reconciliation with any of its neighbors, with the possible exception of Iraq. Syria too has yet to reach for the future by putting the past into perspective. Iraq is too involved in its permanent war against its own population to come to terms with its external disputes and problems. External differences also feed the conflict more than water disputes. Hydrologists from Tigris-Euphrates countries, meeting in Cairo or Lussane, would face a flood of history and an immeasurable amount of difficulty in dealing with each other, especially if they came from the various countries' ruling groups. The Syrians would suspect that Turkey is planning to dry up Syria. Turks would suspect that the Syrians plan to use the PKK to destroy their dams and barrages, and the Iraqis would blame the Syrians for their water shortages. A functionalist approach that would pin the region's hopes on technical cooperation is not only unrealistic, it is naive. To that extent, Mariam Lowi's argument that the national conflicts must be resolved before the water disputes is accurate.

The case study strongly suggests that the mainstream literature is not on the correct track when it comes to water disputes and serious conflicts. If the literature were correct to assume that water disputes cause serious conflict, then

Syria would have engaged in a war against Turkey during the shortages caused by the GAP. Despite relative conventional weakness, Syria does possess an arsenal of missiles capable of hitting Turkey's main population centers. Armed with chemical or biological weapons, these primitive missiles are more than an adequate counter-balance to Turkey's overwhelming conventional superiority. Syria followed a policy similar to that of Pakistan in its conflict with India: i.e. avoid conventional warfare and concentrate on guerrilla warfare (in the form of the PKK) and pursue weapons of mass destruction. Consequently, it cannot be said that Syria does not have military options against Turkey in a state-to-state conflict. Syria's problems with Turkey are not caused by the dispute over the waters of the Euphrates, and this is the cardinal reason for the non-occurrence of a direct Syro-Turkish war. Put in the abstract, water disputes are a function of conflict when the two occur together and not vice versa.

Identity tends to be both the organizing criteria and cause of conflict. It is rooted in the language of exclusion and inclusion of groups into or out of the respective national governing communities of the states involved. Kurds are excluded from full citizenship in Turkey, non-Alawites are excluded from full citizenship in Syria, and non-Sunni Arab peoples are excluded from full participation in Iraq. Conflicts have erupted within each of these three states precisely along the lines of internal identity markers. The sole exception to serious internal civil wars and conflicts has been Iran which oppresses its small Bahai community. The *Mujahidi-e Khalq* cannot be considered a serious internal problem for Iran, because it is clearly an instrument of Iraqi policy towards Iran.

In our quest for rational explanation of phenomena like war and conflict, we tend to assume that these problems are caused by rational reasons like disputes over property. Yet, nothing could be further from the truth. Revulsion felt by states towards other states and by peoples towards each other does not recognize rationality and reason. Conflict is a function of history and culture, or more precisely identity. A Kurdish state would greatly reduce the scope and frequency of warfare in the Tigris-Euphrates valley. Alternatively, genuine democratization in Turkey, Iran, Syria and Iraq would ameliorate the Kurds' demands somewhat. Under either scenario, the states in the region need to reduce the barriers to cooperation. Turkey needs to understand that it is rather un-European to bully and intimidate its neighbors or internal minorities. With changes in Turkey's behavior, Syria could begin to move toward meeting Turkey halfway. Iran is already playing a far more stable and cooperative role in the regions, and a change in Turkey towards a coexistence-based foreign policy would entangle Iran further into peaceful relations with its neighbors. As for Iraq, it is not likely that any improvements will take place under a minority Takriti Baathist Sunni Arab government. Increased cooperation would cut the cycles of mutual satanization that dominate the Tigris-Euphrates basin and would allow for the creation of mutually acceptable allocative water distribution regimes. *Confirming the Nile case study, this case study shows that there is no causal link between water disputes and conflict.*

CHAPTER V

THE INDUS CASE STUDY

Like the Nile and the Tigris-Euphrates basins, the Indus basin is one of the earliest cradles of civilization. The Indus valley civilization saw the rise of cities like Harappa and Mohenjo Daro five thousand years ago. The civilization was based on agriculture. It declined for disputed and perhaps unknowable reasons. What is clear is that Indo-European peoples moved into the North Indian plain and settled it, bringing the basics of Hindu culture and religion as well as the Sanskrit language with them. While being ruled by centralizing native dynasties from time to time, the country was divided into many polities during most of its history. Furthermore, India saw invasions, conquests and governance by Persians, Macedonians, Huns, Arabs, Turks and finally the British. The British reunited India by imposing direct rule in most of its regions and subordinating the remaining princely states to their paramountcy.

Like the Tigris-Euphrates basin, the Indus basin saw no conflict during its imperial period. British rule rendered conflict moot. But with the departure of the British, British India's two successor states, India and Pakistan, began to squabble over the waters of the river as a part of their overall struggle. Water hardly mattered as a source of conflict. The water disputes could and were reduced to engineering questions and the Indus River is under a settled regime today. Indian and Pakistani hydrologists meet, coordinate and exchange information while their respective countries fight wars, build nuclear weapons, subvert each other, and engage in brinksmanship.

The nature of the Indo-Pakistani conflict is emotional and religious. There is little in terms of "realistic" goals being pursued by either country. The pain of the partition process continues to embitter both sides and the conflict has evolved into intractability, rendering resolution more difficult with each passing year. This difficulty has been exacerbated by the construction of each country's independence myths. For Pakistan, Muhammad Ali Jinnah led a glorious struggle that resulted in the creation of the country. Jinnah accepted Viceroy Mountbatten's form of Pakistan without joy, because his true aim was to create a federation of Muslim states within India enjoying a position of equality with a Hindu federation also within India. Jinnah's threats of separation were intended as bargaining chips. Likewise, Congress was not as opposed to partition as the standard history texts suggest. Certainly, Gandhi would have preferred a united India, but most of his chief lieutenants, including the crucial Jawaharlal Nehru, actually favored partition and the creation of Pakistan for economic, ideological and nationalistic reasons.

Since 1960, the Indus has seen the conflict between the two states, each encapsulating an emerging national population that share its banks and waters. Its flow and direction are regulated by a special priesthood drawn from each state. This is a priesthood dedicated to the dams, barrages, and other "temples of modernity" that impede its natural flow and impose a heavy price on its flora and fauna. This priesthood shares a language. Using the language of river-control, this priesthood can talk in ways that the two states themselves cannot. The existence of this channel of communication and this common language did not create greater opportunities for cooperation between the states, because the roots of their conflict lie deep in their respective identities and the painful circumstances of their birth.

NATURAL HYDROLOGY

Like the Nile, the Indus has been studied and developed by British hydrologists. Nevertheless, the precise size of its basin is not clear to this day. The basin lies in Afghanistan, Pakistan, India and China. Yet, it is clear that most of the water enters the river from Indian, or at least Indian-controlled, sources. The Indus is a very large river by world standards. It is about 2,900 kilometers long and drains an area between 980,000 and 1,165,000 square kilometers. The river's annual discharge is 207 cubic kilometers, more than twice the discharge of the Nile. Seventy thousand square kilometers of the drainage basin are in the Kabul River sub-basin in Afghanistan. Pakistan controls about 518,000 square kilometers that lie inside Pakistan and Pakistani-controlled Kashmir, and India is sovereign over some 389,000-453,000 square kilometers, with the balance under Chinese rule. The river's headwaters lie 5000 meters above sea level inside Chinese-controlled Tibet. It flows within Tibet for about 320 kilometers. Once the river enters the Indian-controlled Ladakh district of Jammu and Kashmir, it is joined by its first tributary, the Zaskar. While in the Indian-Controlled Jammu and Kashmir Himalaya highlands, the river is fed by glaciers and ice streams such as the Shyok, the Shigar, the Gilgit and the Astor. Avoiding the Nanga Parbat Massif, it enters Pakistan while flowing in very deep wide gorges (about 18-24 kilometers wide and 4500-5,500 meters deep). At this point, the river flows at an elevation of some 1,200-1500 meters. It moves on to the area between Swat and Hazara in Pakistan as a very rapid mountain stream, similar in some respects to the Blue Nile in Ethiopia, and continues in that form until it reaches the Tarbela dam in Pakistan. Shortly thereafter, the river is joined by the Kabul river at Attock. At this point the river is 600-700 meters above sea level and is crossed by the

first bridges built to span it. At the Salt Range near Kalabagh, the river enters the plains of Pakistani Punjab. At this point it is joined by its Punjab tributaries which flow into each other before flowing into the Indus. These tributaries include the Jhelum, the Chenab, the Ravi, the Beas and the Sutlej. With the waters of these tributaries absorbed, the Indus becomes a much larger river and flows southward towards the dry plains of Sindh and into the Arabian Sea of the Indian Ocean. Near the Indian Ocean, the river slows down and silt is deposited at its bottom and the river begins to form a delta near Thatta. The delta covers an area of 3,000 square kilometers southeast of the Karachi metropolitan area.¹

AFGHANISTAN

Afghanistan's primary contribution to the basin's waters' is the Kabul River. The Kabul flows largely within Afghan territory and is heavily utilized in the rural areas surrounding Kabul. Of the river's 700 kilometer-length, 560 kilometers flow within Afghanistan. The river's basin comprises 12 percent of Afghanistan's territory, fed by the Kunar tributary at Jalalabad. The Kunar adds 10 cubic kilometers a year to the Kabul's flow. The river also has three other tributaries, the Lowgar, the Alingar and the Panjsher. The Kabul river flows East towards Pakistan, and along the way, it is joined by the Panjsher (Five Lion) River. After merging with the Panjsher, it flows into Pakistan. In areas West of Kabul, the river is heavily used for agriculture and it

¹Center for Natural Resources, Energy and Transport of the Department of Economic and Social Affairs of the United Nations, *Register of International Rivers* (Oxford, England: Pergamon Press, 1978), p. 15; *Encyclopedia Britannica Online*, "Indus River," <<http://www.eb.com>> , accessed 15 November 1998; Charles Joy, *Taming Asia's Indus River: The Challenge of Desert Drought and Flood* (New York: Coward-McCann, 1964), pp. 17-18.

sometimes runs dry. Afghan use of the river is largely in the form of simple water extraction for irrigation purposes.² Despite its occasional demise, the river does flow into Pakistan, providing that country with a fair amount of water.

INDIA AND PAKISTAN

In addition to its share of the main channel of the Indus itself and a part of the Kabul sub-basin, several major tributaries flow within Pakistani territory. The Jhelum River begins within Indian-controlled Jammu and Kashmir from a spring near Vernag. The river flows Northwest and enters Wular Lake at the Vale of Kashmir. It leaves the lake to cross the Pir Panjal heights in a 2,100 meter deep gorge into the Pakistani-controlled section of Jammu and Kashmir. It then flows towards the Northwest Frontier Province of Pakistan and partially constitutes the province's border with the Pakistani-controlled state of "Azad Kashmir." The river then breaks through a kind of hill or ridge region, called a *siwalik*, in India and Pakistan and begins to flow into the Pakistani Province of Punjab. Near a town named after it, the Jhelum joins the Chenab River. The Jhelum River is about 725 kilometers long with most of its length well within Pakistan. The Chenab follows a similar path. It starts in the Indian State of Himchal Pradesh and flows westward into Jammu and Kashmir. From Kashmir, the river flows into Pakistan proper and absorbs the Jhelum. The Chenab is longer than the Jhelum at 974 kilometers. The Chenab, now merged with the Jhelum, flows southward and westward in Pakistan where it is joined by the Ravi south of Lahore. Like the Jhelum, the Ravi originates in

²Food and Agriculture Organization, "Aquastat: Afghanistan" (March 1997), <<http://www.fao.org/ag/aglw/aquastat/afghanis.htm>>, accessed 29 November 1998; *Encyclopedia Britannica Online*, "Kabul River," <<http://www.eb.com>>, accessed 29 November 1998.

India's Himchal Pradesh. It flows towards Jammu and Kashmir, but turns southward and westward at its border. It straddles the border between Indian and Pakistani controlled portions of Kashmir for 80 kilometers before flowing into the plains of Pakistani Punjab. It flows into the Chenab south of Lahore in Pakistani Punjab. The Ravi is 725 kilometers long and was the center of India and Pakistan's pre-1960 water disputes. Unlike the Ravi and all the other rivers of the Punjab, the Beas flows almost entirely within India. It begins from the Indian State of Himchal Pradesh and flows southward into the Indian State of Punjab where it flows into the Sutlej River. Its entire length of 470 kilometers is within India. The Sutlej, on the other hand, is much longer, larger and more international. The Sutlej begins in Tibet at an elevation of 4,600 meters. It enters India's Himchal Pradesh State and from there it flows southwards into the Indian State of Punjab. In Indian Punjab, the Sutlej absorbs the Beas and forms 105 kilometers of the Indo-Pakistani border. It enters Pakistani Punjab and joins the Chenab near Bahawalpur. With the merger of the Chenab and the Sutlej, the Panjnad is formed. The Panjnad flows into the Indus after a short flow westward in the plains of Pakistani Punjab. The Sutlej is 1,450 kilometers long, making it the second largest river in the Indus basin. Like the Ravi, the Sutlej was a source of friction between India and Pakistan before 1960.³

WATER UTILIZATION

The Indus basin served as the home of the Indus valley civilization. This agricultural civilization may have disappeared as a result of natural or hydrological

³*Encyclopedia Britannica Online*, "The Ravi," "The Beas," "The Sutlej," "The Chenab," and "The Jhelum," <<http://www.eb.com>>, accessed 29 November 1998.

disasters that were followed by the movement of Indo-European peoples into the region. The same disasters probably resulted in a dry climate on the steppes, forcing people there to look for better pastures. By 1500 BC, many of these steppe dwellers found themselves in the areas known today as India, Pakistan and Iran. This movement of peoples into India resulted in the creation of a unique new civilization combining elements of the older civilization with the culture of the new settlers. Like its predecessor, the new Hindu civilization of India was an agricultural civilization relying on the cultivation of wheat and rice in the Ganges and Indus basins. Like every other great civilization, the intellectual, artistic, and philosophical accomplishments of this civilization depended ultimately on the agricultural output of its farmers and peasants. These early Indo-European settlers were followed, in time, by Zoroasterian Persian, Hellenistic, Muslim Arab, Mongol, Shamanistic Turkish, Hunish, Muslim Persian, Muslim Turkish, Portugese, French and British invaders. Throughout all the cycles of invasion, settlement, assimilation and cultural change, the sub-continent remained dependent on its river systems and the monsoons for agriculture and food production.⁴ The peoples of India drew water from these rivers with canals and other traditional water diversion methods. The first modern attempts to develop the Indus began in the 1850s under the British. In 1859, the British completed their first hydraulic project on the Indus. The project consisted of a canal, called the Upper Bari Doab canal, that was fed from the Madhopur headworks constructed on the Ravi River. This project later became a subject of a dispute between India and Pakistan, because the canal was allocated to Pakistan

⁴Arthur Geddes, *Man and Land in South Asia* (New Delhi: Concept Publishing Company, 1982), pp. 91-112.

while the headworks remained in India. The next major British project, the Sakkur barrage, was completed in 1932. The barrage was India's first truly modern hydraulic project. It is now in Pakistan's Sindh province. Since that time, India and Pakistan have completed many other water projects in the Indus basin.⁵ China has yet to try to develop its share of the Indus basin. Given the altitudes and the terrain involved, it is unlikely that China would try to dam its portions of the Indus and its associated tributaries. Afghanistan, on the other hand, has completed one major project on the Kabul tributary of the Indus.

AFGHANISTANI WATER DEVELOPMENT PROGRAMS

Afghanistan sits on four major hydraulic basins, including the Helmand river basin which is shared with Iran, and the Amur Darya basin which is shared with Uzbekistan and Tajikistan. The Kabul River catchment within Afghanistan is a part of the Indus Basin, and it constitutes 12 percent of Afghanistani territory. It has been estimated that the country's rivers and *qanat* systems provide it with 55 cubic kilometers of water a year-- including 10 cubic kilometers that flow from Pakistan. Afghans use 26.11 cubic kilometers of this water a year. As noted earlier, water is drained from the Kabul River to irrigate fields on a traditional basis. The only modern development on the Kabul River has been the hydroelectric station at Panjsher. Afghanistan's total installed electrical generation capacity is 281 MW. Seventy percent of this comes from two hydroelectric plants including the power station near Panjsher. Before the Soviet invasion, Afghanistan cultivated 2.8-3.1 million hectares of land throughout its various

⁵Food and Agriculture Organization, "Pakistan," *Irrigation In the Near East Region in Figures*, <<http://www.fao.org/news/desert/docs/372135/3721350o.htm>>, accessed 30 November 1998.

basins. About half of this land was under rain-fed agriculture and the rest irrigated along traditional lines. Perhaps an eighth of this land was in the Indus basin. Before the Soviet invasion, Afghanistan enjoyed the world's highest per capita wheat output. There are no current statistics regarding Afghanistan's cultivated area and agricultural output.⁶

PAKISTANI WATER DEVELOPMENT PROGRAMS

Pakistan's water development programs date to the British projects discussed earlier. The country has 29.9 million hectares of cultivable land. Thirty-seven percent of this arable land lies inside the Indus basin. Pakistan cultivates 16.96 million hectares of land throughout its entire territory. Of this amount, some 14.33 million hectares are within the Indus basin. Pakistan's share of the Indus basin includes the whole area of the Provinces of Sindh, Punjab and the Northwest Frontier Agency Province. In addition, Pakistani-controlled Azad Kashmir also lies entirely within the Basin. The only remaining Pakistani territory, Balochistan (alternativealy Baluchistan) also partially lies within the Indus Basin. Aside from the Warsak Dam on the Kabul River, Pakistan relies almost exclusively on the Indus for water. The Warsak Dam was built with Canadian assistance during the 1950s and 1960s. It is safe to say that Pakistan is the "gift of the Indus." The Pakistani government manages the world's largest coordinated irrigation project, the Indus Basin Irrigation System (IBIS), and has several dams and dozens of major canal works under its control. IBIS includes 13.97 million hectares of land. A variety of private, provincial and other Water and Power Development Authority

⁶Food and Agriculture Organization, *Aquastat: Afghanistan*; *Encyclopedia Britannica Online*, "Kabul River," <<http://www.eb.com>> , accessed 29 November 1998.

(WAPDA) programs cover the balance of the cultivated land within the Indus basin.⁷

While it is a part of the Pakistani government, WAPDA operates within the framework of the 1960 Indus Waters Treaty with India. It has two major dams under its control: the Mangla Dam and the Tarbela Dam.

Located at the lower end of the Jhelum river, the Mangla Dam was built by 1967. It is more than 120 meters high and has a storage capacity of 58.8 cubic kilometers of water. It is used to irrigate 1.2 million hectares of land. It has an installed hydroelectric power generation capacity of 300-1000 MW. This wide range of figures for the dam's installed hydroelectrical output may be caused by the increasing siltation it faces. The problem is not the Mangala Dam's alone however. Pakistan's other major dam, the Tarbela, which blocks the Indus, also suffers from some siltation. The dam's construction ended in 1975, and it is claimed by the Pakistani government to be the largest earth and rock-fill dam in the world. It is about 180 meters high, with a storage capacity of 106.4 cubic kilometers of water. It has an installed power generation capacity of 3,500 MW. Next in importance in the Indus are the eight massive inter-river canals constructed in Pakistan to move water from the Jhelum, Chenab and the Indus into the Pakistani canals that once relied on water from the Ravi, the Beas and the Sutlej whose waters are assigned to India. These canals are over 622 kilometers long and approach major natural rivers in their size and ability to move immense amounts of water. In fact, the Bucketwheel (a machine now rusting into oblivion in the Upper Nile) was built to dig these canals. To regulate the rate of water flow into these canals, five major barrages

⁷Food and Agriculture Organization, *Aquastat: Pakistan*; Joy, *Taming Asia's Indus River*, p. 90

have been built on the various rivers. The Sidhani barrage regulates the flow of water on the Ravi. The Qadirabad and Maral regulate water flow out of the Chenab. The Rasul regulates water flow out the Jhelum. The largest and most important barrage is the Chashma on the Indus River. This barrage has been modified to function as both a barrage and water reservoir. It has a storage capacity of 9.2 cubic kilometers in its pond. WAPDA also has a number of pending projects. These projects include the Chashma Right Bank Canal which is to have been completed in the late 1990s. This canal will take water out of the Indus near the Chashma and carry it for about 150 kilometers. A second project aims to clean, repair and modernize the canal system in Eastern Baluchistan. With these repairs, WAPDA hopes to bring more than 100,000 hectares of land into production in the province's portion of the Indus basin. In addition to these projects, WAPDA has several power generation projects. One of these is located downstream from the Tarbela Dam. Water from the Indus would be diverted to 52 kilometer-long power channel to a power generation complex near the city of Attock. The cost of this project is estimated to be U.S. \$2.3 billion. Another 1500 MW capacity power-production project involves the Jhelum River, but it is at the conceptual stage at the time of writing. Despite these gigantic projects, WAPDA seems to be concentrating on smaller, run-of- the waterway projects. Many of its pending projects entail 100-180 MW of installed capacity.⁸

The only major pending WAPDA project is the Kalabagh Dam. This dam is important in several ways. First, it is designed to replace the dams at Tarbela and Mangala, because the two older dams are silting up. Second, the Kalabagh Dam is

⁸Government of Pakistan, *WAPDA*, <<http://www.pak.gov.pk/govt/wapda.htm>>, accessed 16 October 1998.

controversial in several ways. Its environmental impact is being debated and its cost-efficiency is open to question. Third, the debate over the dam brings to question the hydrological wisdom of the Indus' current dams. Finally, the Kalabagh Dam seems to have set off an internal Pakistani dispute between Punjab and the other three provinces. The dispute goes beyond water, because it partially parallels Pakistan's internal cultural borders. Perhaps it is not a coincidence that the NWFP is attempting to adopt the name "Pukhtunkhwa" in reference to its dominant ethnic group. Thus far, Pakistan has managed its internal water disputes between its five regions (the four provinces and Azad Kashmir) quite well, thus the internal Pakistani Kalabagh-related water disputes represent a departure for internal Pakistani politics. On the face of it, the dam appears like a good idea. The Kalabagh dam is a major multi-purpose dam. It is designed to replace the lost reservoir capacity of the two older dams and to add an installed capacity of 3600 MW of hydroelectric generation capability. It will hold 74.6 cubic kilometers of water in its reservoir and it will be used to irrigate areas currently irrigated by the Mangla and Tarbela dams.⁹

The reservations of Sindh, Baluchistan and the NWFP "Pakhtunkhwa" center around two issues: fear of reduced supplies in the future (Baluchistan and the NWFP) and fear of Punjab's ability to restrict the flow of the Indus (Sindh). Sindh bitterly disputes the projections put forth by WAPDA. The Kutch area of Sindh would receive less water causing it to lose precious wetland habitat. In the NWFP, the dam will displace more than 30,000 people. The NWFP contends that the 2,000 people displaced by the Trabela

⁹Abdul Majid Kazi and A. N. G. Abbasi, Nadeem Jamali, trans., *Kalabagh Dam: Look Before You Leap*, (7 June 1997), <<http://osl.cs.uiuc.edu/~jamali/kalabagh>>, accessed 1 December 1998.

dam were not compensated, so it has no reason to expect the central government of Pakistan to compensate those who will be displaced by the Kalabagh Dam.¹⁰

INDIAN WATER DEVELOPMENT PROGRAMS

Unlike Pakistan, India enjoys many river basins, and some of its internal states cover more than one river basin. The Indian states of Jammu and Kashmir, Himchal Pradesh, Haryana, Punjab, Rajasthan, Gujrat, and the Indian Union territories of Chandigarh and Delhi are at least partially located inside the Indus basin. Like Pakistan, India has a federal water authority. In India, this authority is called the Ministry of Water Resources. Having multiple river basins gives India the luxury of meeting shortfalls in one basin with surpluses from another. Consequently, much of the MWR's recent focus has been on intra-Indian, inter-state water transfers. India has the potential to irrigate 78.78 million hectares and was planning to increase this potential irrigated area to 89.42 million hectares in 1996. This includes land outside in the Indus basin and land that is irrigated under India's current and pending inter-basin water transfer projects.¹¹

Nevertheless, India has several already-completed programs in the Indus basin. These include the Bhakara Dam, the Pong Dam, the Nangal Dam and the Sirhind Canal on the Sutlej, and headworks of the Upper Doab canal that feeds water into Pakistani Punjab on the Ravi. The Nangal Dam was begun under the British and was built to divert the Sutlej

¹⁰Beena Sarwar, "Environment Pakistan: Kalabagh Dam Ignites Political Discord," *Inter Press Service* (June 1998), http://www.oneworld.org/ips2/june98/09_16_034.html, accessed 1 December 1998.

¹¹Government of India, Press Information Bureau. *Water Resources* <http://www.nic.in/India/PIB/bwater.htm>, accessed 11 April 1999; Government of India, Press Information Bureau, *Water Highlights*, <http://www.nic.in/India/PIB/water.htm>, accessed 11 April 1999.

into a new canal. In the wake of the Indus Waters Treaty, a new, much larger dam was built a short distance upstream in India with American and World Bank assistance. This was the Bhakra Dam with a storage capacity of ten cubic kilometers of water, an installed hydroelectric power generation capacity of 1,050 megawatts, and an immense capacity for irrigation. The two primary beneficiaries of this new dam were the Indian states of Punjab and Rajasthan.¹² The main means of moving the water downstream from the Nangal-Bharka project to Punjab and Rajasthan is the Indira Gandhi Canal (formerly the Rajasthan Canal). This canal carries Nangal-Bharka reservoir water from the Harike Barrage on the confluence of the Sutlej and the Beas into Punjab and Rajasthan and terminates after carrying water 470 kilometers from its source.¹³ It has had a remarkable effect on life in these two states.

In Punjab, the area under cultivation increased from 3.76 million hectares in 1960-1961 to 7.6 million hectares in 1996-1997 and the crop yields increased dramatically. With the construction of the canal and the advent of the Green Revolution's introduction of dwarf wheat varieties, wheat yields increased from 2.238 tons per hectare to 4.01 tons per hectares. These changes transformed Punjab from a net importer of grains and agricultural products into India's breadbasket and wealthiest state.¹⁴ This has profound

¹²*Encyclopedia Britannica Online*, "Himalayas" <<http://www.eb.com>>, accessed 12 April 1999.

¹³*Encyclopedia Britannica Online*, "Thar Desert" <<http://www.eb.com>>, accessed 12 April 1999.

¹⁴Government of Punjab (India), *Punjab-Agriculture: Agricultural Scenario in the State, The Green Revolution, and Factors behind the Success of Green Revolution*, and *Punjab-Economy' Agriculture and Allied Sector* <<http://www.nic.in/punjab>>, accessed 5 April 1999.

political implications for those seeking to create a Sikh state in India's Punjab state, and these shall be discussed in the section on conflict. Rajasthan was also able to benefit from Indian Indus basin water programs but not to the same extent. Rajasthan receives 12 cubic kilometers of water from the Indus basin river system's Ravi, Beas and Sutlej tributaries. This water is carried by the Indira Gandhi canal which is in its second stage of construction. Some 0.545 million hectares were irrigated in the first stage which was completed in 1986 and 0.731 million hectares are likely to come under irrigation with the completion of the second stage. Since the 1950s, cereal production in Rajasthan increased from 3.38 million tons to 13.19 million tons, due to irrigation and the dwarf strains of wheat introduced by the Green Revolution. Despite this progress, Rajasthan's agricultural development remains hampered due to several factors openly admitted to by the government of Rajasthan. Included among these factors are the increases in population, the low status of women (who do most of the farming in the local social culture), and the continued reliance of an overwhelming number of farmers on rain-fed agriculture and the short monsoon season. Clearly, Rajasthan has made progress with the introduction of the Indus Rivers's water into its Thar Desert, but it is progress trails the strides made by Punjab in many respects.¹⁵

PATTERNS OF WATER USE IN THE INDUS BASIN

Unlike the Tigris-Euphrates, water consumption in the Indus basin is largely regulated by treaty. Afghanistan, which is not a party to the Indus Waters Treaty, withdraws water only from the Kabul and does not have a share in the rivers constituting

¹⁵Government of Rajasthan, *Irrigation and Flood Control and Agriculture Production* <<http://www.rajgovt.org/plan>>, accessed 5 April 1999.

the Punjab system. The Afghan portion of the Indus basin contributes some water to Afghanistan's annual consumption of 26.11 cubic kilometers of water. Kabul waters constitute a mere 12 percent of the country's annually renewable base of 55 cubic kilometers of water, which means that most of the country's agriculture takes place outside the Indus basin, and most of the water is allowed to flow into Pakistan after being harnessed for electric power. Like Sudan and Ethiopia, the country also enjoys substantial rain-fed agriculture. Consequently, it is safe to say that Afghanistan is not a major user of Indus basin waters.¹⁶

The largest user of Indus waters is Pakistan, although it contributes very little water to the system. In terms of the basin's water capturing regions, it controls only a part of the highlands of Kashmir, leaving Harayana and Himchal Pradesh totally outside Pakistan. Under the Indus Waters Treaty, Pakistan has the right to the unrestricted use of the three Western rivers—the Indus itself, the Jhelum and the Chenab. India has unrestricted use of the smaller three Eastern tributaries, the Ravi, the Beas and the Sutlej. The erratic nature of the Indus system makes planning controversial and difficult. It also influences the published data on the river. As a result, this study uses the figures used in the making of the treaty itself. Under these measurements, Pakistan has the right to use 166.14 cubic kilometers of water as it sees fit. India is entitled to use 34.24 cubic kilometers of water from the Eastern rivers plus an authorized transfer from Pakistan that varies by year. At independence, Pakistan was using 78-79 cubic kilometers of water and allowed the balance to flow to the sea and the swamps at the mouth of the river. Today Pakistan uses 129.6 cubic kilometers of water and plans to utilize 143.5 cubic

¹⁶Food and Agriculture Organization, *Aquastat: Afghanistan*.

kilometers of water in the future. Pakistan was planning to release 12.29 cubic kilometers of water into the sea, but has reduced the amount to 7.01 cubic kilometers. These plans will make the country very vulnerable during low-flow years and during drought; the environmental strain on the swamps at the mouth of the river and the nearby shallow seas is bound to increase. Kazi and Abbasi, two critics of Pakistan's plans, cite the reduction and destruction of the mangrove forest area in the Indus delta, the destruction of important fish species, the threat posed to the Indus river dolphin and the deforestation of the lower reaches of the river as evidence for what they regard as Pakistani government mismanagement of the river's water resources.¹⁷

India, with its smaller allocation, appears to have been more ambitious than Pakistan in some respects. Of its allocation, India uses 19.38 cubic kilometers of water. It allocates this water to some of its states. Punjab and Haryana receive 4.28 cubic kilometers of water each, Rajasthan is allocated 10.53 cubic kilometers of water, the state of Jammu and Kashmir receives 0.795 cubic kilometers of water, and the Indian capital of Delhi is allocated 0.25 cubic kilometers of water. Many in Punjab are not pleased with Rajasthan's allocation. Critics of India's Indus waters program argue that the Indira Gandhi Canal and the water it delivers to Rajasthan are inefficient and economically unjustifiable. Furthermore, the Sikh claims to the waters from the Ravi and Beas have become a litmus test for Sikh nationalism, despite India's immense investments in Punjab's agriculture.¹⁸ The rise in India's population and its demand for food may make

¹⁷Geddes, *Man and Land*, pp. 143-144. .

¹⁸S. Gurpreet Singh Dhillon, *Punjab Crisis: An Analysis*,
<<http://www.khalistan.net/pu-crisis.htm>>, accessed 29 November 1998.

the dispute between the Sikhs and Rajasthan moot. Given the immense challenge of India's population growth, the whole Indian allocation may not be enough to satisfy either Rajasthan or Punjab.

AGRICULTURAL AND DEMOGRAPHIC TRENDS

By applying the lessons of the Green Revolution, both India and Pakistan have avoided national food catastrophes. The national account of the agricultural sector, measured in constant 1980/1981 billions Pakistani Rupees, has almost doubled between 1981 and 1997. India, on the other hand, has seen its equivalent measure rise by about 50 percent.¹⁹ Haryana and the state of Punjab produce 60 to 65 percent of India's foodstuffs with their water allocation, and both states have so far managed to increase yields to meet the needs of India's growing population, but Punjab enjoys only 1.5 percent of India's area, and it is not likely to be able to meet India's future needs. Consequently, India's attention is shifting to areas outside the Indus valley for food. Unlike Iraq, Syria, Egypt and Iran, India is a net food-exporter. The country exports a modest 5-6 million tons of cereals a year. The country retains 30 million tons of grain as a buffer against crop failure and produces about 200 million tons of grain a year. Its 1950-1951 production, in contrast, was a paltry 50.8 million tons.²⁰ India's population increased by 2.5 times but its food output has quadrupled. Pakistan has not been as fortunate as India, especially

¹⁹Asian Development Bank, "Pakistan National Account – Agriculture," <http://internotes.asiadevbank.org/notes/pak/27ae.htm>, accessed 29 November 1998; Asian Development Bank, "India National Account Agriculture," <http://internotes.asiadevbank.org/notes/ind/2826.htm>, accessed 29 November 1998.

²⁰M.G. Srinath, "India's Food Security Continues To Be Fragile Despite Progress," *Deutsche Press Agentur* (5 August 1997), <http://infoweb4.newsbank.com/bin/gate.exe>.

recently. Pakistan wheat production was stagnant in the mid-1990s, and rice production increased by only 15 percent. The country had to import some 4 million tons of American wheat in 1994. Unlike the sustainable gains in yield per hectare experienced in India, Pakistan's per hectare wheat yields dipped slightly in the mid-1990s.²¹ In contrast, India has become a net exporter of wheat. While Pakistan's production has increased greatly since the treaty, it has not kept pace with India's. The Indians face a much larger population problem and the success of the Green Revolution in India may be a consequence of the harsher necessities facing the country. Table 1 below illustrates the demographic pressures facing India and Pakistan.

Table 18: Projected Population Growth in Indus Basin States in millions of people.

Country	1996	2010	2020
Afghanistan	22.7	34.1	43.0
Pakistan	129.3	170.8	198.7
India	952.1	1,155.8	1,289.5

SOURCE: U.S. Department of Commerce, Bureau of the Census, as cited in *The World Almanac and Book of Facts*, (Mahwah, N.J.: World Almanac Books, 1997), pp. 838-839.

While the proportion of Pakistanis to Indians will not change by the year 2020, the absolute numbers paint a different picture. Between 1996 and 2020, India is projected to add more people than there will be in the projected population of Pakistan for 2020. India will have a billion more people, and should it manage to keep up its agricultural improvements, it will have a even greater advantage over Pakistan in terms of military power. In the age of the nuclear-armed mega-state, the country most able to absorb the

²¹Government of Pakistan, *Agriculture: Production*, <<http://www.pak.gov.pk/govt/agri/agri1.htm>>, accessed 29 November 1998.

blows from its enemy's arsenal is the more powerful state—blessed with the option of initiating nuclear conflict at will. As the population grows, the pressure to abrogate the Indus Waters Treaty will grow. To the extent that there is a regime already in place, the opportunity that presented itself in the 1960s can be said to have been successfully exploited. Whether the regime will withstand the pressure of the increases in population is an open question, and whether it would lead to conflict is yet another question. It is clear, however, that water has not been a cause of conflict between India and Pakistan. Disputes over the Indus have always been and continue to be a function of the broader Indo-Pakistani rivalry and its root causes: religion and identity.

REGIMES

Despite this grave and sometimes deadly rivalry, India and Pakistan have been able to divide the waters of the Indus Basin in an orderly manner. The Indus Waters Treaty is as close to a universal basin-wide agreement as possible. It does not include the waters of the Kabul – which are left for bilateral Afghan-Pakistani arrangements. It does not include China either, but given the flow of the streams in China and their gradients, it is doubtful that China would be developing the streams that flow out of it into the Indus basin. Consequently, the Indus Waters Treaty represents the most complete regime among the three case studies in this effort. The treaty was preceded by the Inter-Dominion Accord of 4 May 1948 and represents a formalization of arrangements made then. Under the Inter-Dominion Accord, India agreed to release water for Pakistani use

on an annual fee basis. This temporary accord was meant to be replaced by a more permanent arrangement, but by 1951, neither side was willing to compromise.²²

It was believed that without a settlement on the issue of water rights, India and Pakistan would not be able to resolve their differences on Kashmir and other issues. According to one official Indian source, "India and Pakistan can go on shouting on Kashmir for all time to come, but an early settlement on the Indus waters is essential for maintenance of peace in the sub-continent."²³ While this assessment certainly may have encouraged the swift negotiation of an agreement, it was certainly inaccurate. India and Pakistan have fought two major conventional wars since the treaty's implementation; in addition, both states have engaged in destabilizing each other through the use of proxy guerilla organizations in Kashmir and Sindh. But in 1951, it was believed, at least in some parts of the Indian government, that a settlement on the issue of Indus Water rights was essential for the peaceful development of the sub-continent.

That same year, the former head of the Tennessee Valley Authority and the United States Atomic Energy Commission, Mr. David Lilienthal was visiting India and Pakistan, ostensibly to write an article for Collier's magazine on the region. Before he flew to India and Pakistan, Lilienthal had been briefed by state department and White House officials. It is clear that the Eisenhower administration sought to defuse the Indo-Pakistani rivalry. So, it resorted to what can be described as engineering politics.

²²Michael Newbill, "Indus Waters Treaty: A History," *Confidence Building Measures Project*, Henry Stimson Center <<http://www.stimson.org/cbm/sa/indus.htm>>, accessed 20 November 1998.

²³Niranjan Gulhati, *The Indus Waters Treaty: An Exercise in International Mediation* (Mumbai India: Allied Publishers, 1982), p.16. As cited by Newbill, "Indus Waters Treaty."

Lilienthal suggested that the two countries approach the World Bank to begin looking for ways to solve their problems. Lilienthal and the president of the World Bank, Eugene R. Black, immediately suggested severing the political from the "functional" aspects of the mediation/conduit-work. As a result, a working party composed of Indian, Pakistani and World Bank engineers (i.e. irrigation engineers and hydrologists) began to meet. After two near-breakdowns in the talks, the two sides along with the World Bank and six donor countries (primarily the United States and the United Kingdom), agreed to the terms and the funding of the treaty. The agreement took effect on 1 April 1960 after being signed by Indian Prime Minister, Jawaharlal Nehru and Pakistani President Field Marshall Ayub Khan.²⁴

The treaty has three important features: allocation, finance and adjudication. Of these, the most important function is allocation. The treaty clearly defines which waters belong to India and which waters belong to Pakistan. As stated earlier, the treaty defines the Indus and its five (Punjab) tributaries as main rivers and assigns the three Western rivers (Indus proper, Jhelum and Chenab) to Pakistan and the three Eastern rivers (Ravi, Beas and Sutlej) to India. Each country enjoys unrestricted use of the river waters assigned to it. The agreement's financial aspects included 71 million British pounds to be paid by India, 190 million pounds to be granted by the World Bank, the United States and other western countries. Pakistan contributed 10 million pounds sterling. The treaty also set up the Permanent Indus Committee to help resolve future disputes. This Committee continues to function despite two wars. It facilitates the exchange of data,

²⁴Geddes, *Man and Land*, pp.113-114.

visits and provides a conduit of communication between the two countries regarding the construction of water works in the basin.²⁵

The Indus Waters Treaty can be called a success, but a limited one. The division of "functional" and "political" problems in the Indus remained just that—a separation of hydrology and politics. While Lilienthal, Black and probably Eisenhower had hoped to reduce Indo-Pakistani conflict through the machinery of "functional" cooperation, the very separation they attempted to use to foster better relations between the two countries manifested itself in precisely the opposite manner these men hoped for. India and Pakistan have separated their Indus Water consumption disputes from their other disputes, preferring to relegate their water disputes to the realm of engineering and hydrology while they continue to fight over Kashmir, Sindh and other issues closely related to their respective founding and national identities. More than any other case, the Indus shows us that there is actually little link between disputes over water allocation and war.

POLITICAL CONFLICTS AND WAR

INDO-PAKISTANI WARS

There have been three major wars between India and Pakistan. These were all wars over territory or more precisely wars over symbolic territory. The first and second wars were about who controls Kashmir. The third war was about East Pakistan (Bangladesh) and whether it should be independent. In both cases (Kashmir and Bangladesh), the two sides were attempting to assert their respective identities with their

²⁵Ibid., p. 114.

opponent defined as the "other." As this case study illustrates, the conflicts were never about water. The conflicts appear to be about territory at first glance, but religious and identity issues almost always appear to be important if not the primary factors in the conflict.

THE INDO-PAKISTANI WAR OF 1947

The Muslim-majority Kashmir valley was sold by the British to the Hindu Singh dynasty in the 1850s. Upon India's independence on 14 August 1947, the region's Maharaja attempted to keep the state independent. By October 1947, Kashmir was invaded by Pathan irregulars from Pakistan. Faced with the inability to protect his dominions, which included Buddhist Ladakh and Hindu Jammu, the Maharaja elected to join India. As a result, Indian troops entered Kashmir and fought Pakistani troops and irregulars. The war occurred in an atmosphere of great chaos due to the communal rioting and mass migration that occurred upon the independence of India and Pakistan. The war left Pakistan with 35 percent of the state of Jammu and Kashmir. India initially controlled all the remaining territories until China took over some 20 percent of Kashmir's territory mostly in uninhabited areas such as Aksai Chin in 1962. India annexed its portion of Kashmir as an Indian state with a special status, provided for under article 370 of the Indian constitution. The article designates Kashmir as a "special" Indian state and forbids non-natives from buying land there. Pakistan organized its portion of Kashmir as the puppet state of "*Azad*" (free) Kashmir. The cease fire, arranged by the United Nations, called for a plebiscite to resolve the dispute. India has rejected the idea of a vote on Kashmir's status, arguing that the Maharaja's decision to join India and

Kashmiri participation in the Indian political process provided the requisite legitimacy for Indian sovereignty over Kashmir.²⁶

The causes of the Pakistani invasion of Kashmir and the Indian intervention lay in the views held by Mohammed Ali Jinnah, then Governor-General of Pakistan, and Nehru regarding the respective purposes for their countries' existence. For Jinnah, Pakistan was to be the home of the subcontinent's Muslims (Pakistan means the land of the pure). India's Nehru, on the other hand, believed that India must be a secular multi-religious country. For Nehru, having a Muslim state within India meant that the country included Muslims. These two views were not and are not compatible; this difference in opinion led to the initial conflict between the two states, but the differences mask one crucial area of agreement between Pakistan and India. Both India and Pakistan agree that Kashmir ought not be an independent state. An independent Muslim Kashmir would undermine Pakistan's stated *raison d'être*. For India, such a development would open the floodgates of secession in Punjab (which lies in the Indus basin and is discussed below), Tamil Nadu, Nagaland and Assam. Kashmir is certainly not going to become an independent state. Unfortunately, the conflict between India and Pakistan over Kashmir did not stop in 1947. It continued and developed to what has been called an intractable conflict that has lasted to the present day.²⁷ The existence of some of the sources of the Indus waters in Kashmir was hardly a motivating factor for Pakistan. Himchal Pradesh, then part of

²⁶Jeffrey Key, "Beyond Tilting Both Ways: A New Post Cold War South Asia Policy," *Asian Affairs: An American Review*, Vol. 25, No. 2 (Summer 1998), pp. 89-10; *Economist*, "A Question of Identity," Vol. 332, No. 7746 (15 February 1992), pp. 17-18; *Economist*, "Kashmir's Proxy War," Vol. 324, No. 7774 (29 August 1992), p. 29.

²⁷*Ibid.*

the Indian Punjab, is perhaps as important as Kashmir, because most of the water flows through it at one point or another, but that Indian state has not been a target for Pakistan. This fact, along with the virtual settlement of the water allocation dispute in 1960 and the continuation of the war, suggests that the Indus waters are not a cause of conflict with regard to Kashmir.

THE INDO-PAKISTANI WAR OF 1965

To secure support for their respective positions on Kashmir, India and Pakistan exploited the Cold War. Pakistan joined Iran, Turkey, Iraq, the United Kingdom and the United States in the Central Treaty Organization. The country was rewarded with \$1.5 billion dollars in United States military assistance. India, on the other hand, became a recipient of Soviet weapons and military aid. The armed conflict began in January 1965 after a series of skirmishes in the "Rann of Kutch " (a massive swamp in the lower Indus basin, where India and Pakistan had conflicting claims). By September 1965, the conflict expanded into Kashmir where Pakistan attempted to use irregular troops and guerillas. India responded by reinforcing its garrisons in Kashmir. Pakistan reacted by sending its troops towards Chhamb in Kashmir on 1 September 1965. After 22-23 days of fighting, Pakistan and India agreed to a cease-fire. Both sides had failed to accomplish their military objectives, and the Soviet-sponsored peace agreement of January 1966 returned India and Pakistan to their pre-war frontiers. Pakistan came into the war hoping to re-open the issue of Kashmir with India and with the world community.²⁸ Pakistan did not go to war to secure additional water. It went to war to bring all of Kashmir into Pakistan.

²⁸Ashley Brown, *Modern Warfare: From 1939 to the Present Day* (London: Orbis, 1985), pp. 264-269.

With regard to this aim, Pakistan failed. Needless to say, the war had no impact on the Indus waters treaty arrangements.

THE INDO-PAKISTANI WAR OF 1971

While this war was fought largely in East Pakistan (today's Bangladesh), some fighting actually took place in the Indus basin. The East Pakistani-based Awami League and its leader, Sheikh Mujibur Rahman, had won the December 1970 Pakistani election. This party stood for home rule in East Pakistan. In March 1971, the West Pakistani-dominated military declared martial law and prevented the Awami League from taking office. In addition, it went on a rampage in East Pakistan in an attempt to terrorize Bengalis into accepting West Pakistani leadership. As a result, millions of refugees flowed into India. Some of these refugees, organized as *Mukti Bahini* guerillas, struck back at West Pakistani troops in East Pakistan from bases in India. Naturally, these guerillas had India's support, and India was planning to go to war against Pakistan, but it was Pakistan that attacked first. On 3 December 1971, the Pakistani Air Force struck Indian Air Force bases near the Western (Indus) front. These failed air strikes were accompanied with Pakistani armored thrusts into Kashmir and Rajasthan. India staved off these attacks in the Indus basin and sent its troops deep into East Pakistan forcing the surrender of the West Pakistani troops there. The war was effectively over on 15 December 1971 and Bangladesh became an independent state the following day.²⁹ India's support for the Bangladeshi guerillas had an obvious cause -- a desire to weaken an enemy state by partitioning it along ethnic lines. West Pakistan went to war to protect Pakistan's territorial integrity and to take Kashmir and parts of Rajasthan if possible. At

²⁹Ibid.

this stage, the Indo-Pakistani conflict can be said to have become a permanent feature of the relationship between the two countries—water issues, whether in the Indus or the Ganges were not a cause or a factor in this war.

KHASMIR'S INSURGENCY AND THE PAKISTANI INVASION OF 1999

The insurgency in Kashmir and the recent Pakistani attempts to intervene in the Indian portion of Jammu and Kashmir date to the 1980s. Under Article 370 of the Indian constitution, Kashmir enjoyed powers denied to other Indian states. This meant that the elected Chief Minister of Kashmir, if allowed to develop an independent power base, would be able to make Indian Kashmir independent in all but name. The central authorities in New Delhi were not about to let any Kashmiri politician reach this degree of power. New Delhi developed a policy of political destabilization of Kashmir in order to force its leadership to be dependent on the central government. In 1984, New Delhi helped Ghulam Mohammed Shah depose his brother-in-law Chief Minister Farooq Abdullah. By 1987, New Delhi dumped Shah and replaced him with Abdullah in an election seen by many Kashmiris as dubious. Both Abdullah and Shah belonged to a party called "The National Conference." The opposition parties, led by the Muslim United Front, rejected the results of the election and saw their leadership clusters imprisoned. Once the leadership of the Muslim United Front and other opposition parties was released from prison, they fled to Pakistani-controlled Azad Kashmir and set up headquarters and began to recruit guerillas for an insurgency in Kashmir. The war in nearby Afghanistan was producing hundreds of battle hardened Muslim Mujahedin who could be relied upon to train, assist and lead the anti-New Delhi Kashmiris in their war against India. The militants struck Indian targets in Kashmir in July 1989, and within

weeks, civil war gripped the Vale of Kashmir section of the Indian state of Jammu and Kashmir.³⁰

India responded with an iron fist policy. There are at least 250,000 Indian soldiers in Kashmir including 1,500 paramilitary companies such as the "Rashtriya Rifles" -- one of many paramilitary forces of the Indian government. The presence of the Indian troops and their heavy-handed tactics caused further alienation in Kashmir and fed the ranks of the insurgents. The insurgents themselves, however, began fighting each other over whether Kashmir was to join Pakistan or be independent. The Jammu and Kashmir Liberation Front (JKLF) and many Kashmiri Muslims would like Kashmir to be independent. Islam, as practiced in Kashmir, differs from the varieties practiced in Pakistan and much of the Middle East. Kashmiri Islam is overwhelmingly Sufi and by implication, anti-fundamentalist. It is similar to the folk Islam practiced in Turkey and Egypt. As a result, many Kashmiri Muslims fear union with Pakistan and prefer independence for the Vale of Kashmir with Ladakh and Jammu staying with India. The JKLF is opposed by Pakistan and India as well as pro-Pakistani Kashmiri organizations like *Hizb-ul Mujahedin*. In the meantime, the number of armed Kashmiri paramilitaries has reached 36, including the JKLF and its main rivals. Of these organizations 30 are supported by Pakistan and 6 have various arrangements with India ranging from tacit truces to outright cooperation with the Indian armed forces. The JKLF has such a tacit understanding with India, but is forced to rhetorically attack India and kidnap soldiers on

³⁰Surinder Singh Oberoi, "Kashmir is Bleeding," *The Bulletin of the Atomic Scientists*, Vol. 53, No. 3 (April-March 1997), Internet edition, <<http://www.bullatomsci.org/issues/1997/ma97/ma97oberoi.html>>, accessed 7 August 1999.

occasion to retain its credibility with the Kashmiri public. The numerous new organizations have begun to increasingly replace the JKLF and the *Hizb-ul Mujahedin* in the number and scope of military operations. The Hindu Pandit community of the Vale of Kashmir has been effectively destroyed since 1989. Hindu Kashmiris have been forced to leave the Vale in the wake of attacks by Kashmiri militants of all stripes. Most have sold their homes and fled to Jammu or other more hospitable Indian states like Himchal Pradesh or Maharashtra.³¹

The JKLF is under attack from Pakistan. One of its leaders, Mr. Amanullah Khan, wrote an editorial in a Pakistani paper calling for support for an independent Kashmir in 1995. The newspaper, called "The Nation," published a response a week later. While unofficial, the response reflects Pakistan's reaction to the JKLF's plans for an independent Kashmir. Pakistan's opposition to an independent Kashmir can fairly be described as categorical. Mr. Omar Khalid, a Pakistani commentator, describes the JKLF's position as "treachery," and negates any differences between the Muslims of Kashmir and those of Pakistan. India is never referred to as India. It is initially described as Hindustan, and only later does Khalid use the term *Bharat* which is India's proper name in Hindi and Urdu. Khalid is adamant that annexing Kashmir would "bring about the second renaissance of Muslim power in the Sub-continent."³²

³¹Ibid.; *Economist*, "Kashmir's Proxy War," Vol. 324, No. 7774 (29 August 1992), p. 29; Roger Howard, "Evolving Rather than Receding, the Killing in Kashmir Continues," *Jane's Intelligence Review*, Vol. 11, No. 1 (January 1999), p. 40.

³²Omar Khalid, "JKLF's Politics: A Rejoinder to Amanullah Khan," *The Nation* (Lahore, Pakistan, 20 July 1995), <<http://geocities.com/CapitolHill/3023/rejoinder.html>>, accessed 7 August 1999.

With the JKLF as the main movement in Kashmir and with the Indian and Pakistani nuclear weapons tests and avowals of possession, Pakistan saw both an opportunity and a need to strike at India's position in Kashmir. Believing that it could infiltrate Kashmir without facing an Indian conventional attack due to the risk of nuclear war, Pakistan sent hundreds of Kashmiri militants, regular troops, Afghan Taliban volunteers and a collection of sundry Islamic activists into the Kargil, an Indian-controlled sector of Kashmir in May 1999.³³ After hundreds of deaths on both sides, India pushed back Pakistan's intruders from all areas they occupied on the Indian side of the line of control. The surviving guerillas were withdrawn by Pakistan under United States pressure. On 4 July 1999, United States President William Clinton and Pakistani Prime Minister Nawaz Sharif issued a joint statement saying that the line of control in Kashmir must be respected by both sides. India clearly won the confrontation, because the United States did not support its former ally -- Pakistan. Nevertheless, India seems to have been duped by Pakistan to let its guard down. Atal Bihari Vajpayee, a leader in the currently ruling Bharatiya Janta Party and Indian Prime Minister, took a bus ride to Lahore Pakistan in March 1999 and issued a joint statement with Nawaz Sharif.³⁴ In the joint statement, India and Pakistan agreed not to intervene in each others' internal affairs and to seek negotiated solutions to all outstanding issues between them, including the dispute over Jammu and Kashmir. Until the infiltration of Pakistani irregulars into the Indian state of Jammu and Kashmir in May, the relationship could have been described as

³³*The Times of India*, "Kargil: A Troubled Front" (5 July 1999), <http://www.timesofindia.com/kargil/pakus-text.html>, accessed 8 August 1999.

³⁴Muhammad Nawaz Sharif and Atal Bihari Vajpayee, "A Commitment to Peace," *Presidents and Prime Ministers*, Vol. 8, Issue 2 (March 1999), p. 6.

"improving," but the Kargil crisis effectively aborted the possibility of improved relations between the two countries in the immediate future. Barring Pakistani overtures to India, it is clear that Vajpayee's bus trip to Lahore was a wasted opportunity. There is no sign that Pakistan intends to make peace overtures towards India, because its armed forces continue to shell Indian-held Kashmir and its proxy paramilitaries inside Kashmir continue to wage guerilla war against the Indian forces there. In fact, the Sharif government faced the wrath of the Pakistani public for having "betrayed Kashmir." The coup that brought General Pervez Mushraff to power must be seen through the prism of Kashmir. Given these realities, Kashmir is likely to continue to be a bone of contention between India and Pakistan until the facts on the ground in Kashmir change, probably with the JKLF eliminating its rivals and negotiating for enhanced autonomy for the Vale of Kashmir within India.³⁵

The renowned Indo-British author, Salaman Rushdie, is of Kashmiri origin and has written about the reasons for the recent explosion of conflict in Kashmir. Rushdie's analysis clearly shows that the Kashmiris of the Vale are not likely to welcome Pakistani rule due to the differences in the forms of Islam practiced in Kashmir and in Pakistan. Rushdie posits that the Pakistani intervention in Kashmir was instigated by the army. The Pakistani army, according to Rushdie, disapproved of the Sharif-Vajpayee thaw in the aftermath of the bus trip, because peace with India means that it would lose control

³⁵Naveen S. Garewal, "India Says Pakistan Attempting Intrusions," *Reuters* (7 August 1999); Dinesh Kumar, "Kargil Infiltrators identified as Taliban Militia," *The Times of India* (22 May 1999), <<http://www.timesofindia.com/220599/22indi9.htm>>, accessed 7 August 1999; Mubasher Bukhari, "Anger in the Streets," *The Nation* (Lahore, Pakistan, 1 August 1999), <<http://www.nation.com.pk/review2.htm>>, accessed 8 August 1999.

over the society it has dominated for the last fifty years. Rushdie's view of the role of the Pakistani army in the crisis is endorsed by both the Indian home minister, L. K. Advani and also partially by the *Economist*. Rushdie's analysis also corroborates Oberoi's arguments in *The Bulletin of the Atomic Scientists* regarding the role of India's policies in the current crisis in Kashmir. The attempts by the central government in India to keep Kashmir's home rule government dependent on New Delhi have de-legitimized it in the eyes of many Muslim Vale of Kashmir residents.³⁶ As a result, India would probably need to give the Vale of Kashmir more autonomy (than currently) after separating it from the regions of Jammu and Ladakh. Pakistan's attempts to intervene in the Indian sections of Kashmir both by proxy and by the use of its irregular forces, on the other hand, cannot be ignored or disregarded by the global community, because with the presence of nuclear weapons in both arsenals, such actions are the apex of international irresponsibility. The absence of water disputes as a source of conflict in the Jammu and Kashmir crisis is nearly total. While occasional disagreements on navigation rise from time to time, neither India nor Pakistan have agitated for any changes to the water regime established by the Indus Waters Treaty. The source of conflict in Kashmir is, plainly put, religious politics.

INDIAN PUNJAB

Like Kashmir, the Indian State of Punjab was a source of insecurity to New Delhi. This insecurity stemmed from the fact that the ruling political party, the *Akali Dal*, in the state was based on the Sikh religious community. As such, it had an independent power

³⁶Salman Rushdie, "Kashmir, the Imperiled Paradise," *The New York Times* (3 June 1999), <<http://www.mnet.fr/aiindex/kargil/RushdieKashmir.html>>; *Economist*, "Who Really Runs Kashmir," Vol. 351, No. 8125 (26 June 1999), p. 41.

base and did not rely on the central government. The *Akali Dal* rose to control the state by the late 1970s. It asked for more Indus water and/or more support for Punjab from New Delhi. It was a relatively moderate party that did not seek to create an independent state. To counter its influence, Prime Minister Indira Gandhi used the Sikh religious-political movement led by Sant Bhindranwale. Indira Gandhi banned smoking in Amritsar, declared it a Holy City and gave Bhindranwale's followers free reign over the airwaves in Punjab. These policies seriously weakened the state government of Punjab, but they also resulted in the empowerment of Bhindranwale to the point where Indira Gandhi lost control over him and his followers. Bhindranwale's faction began to attack Sikh apostates, heretics and finally, it began to attack infidels (mostly Hindus and Muslims) in Punjab. These actions forced New Delhi to move against Bhindranwale. Along with his lieutenants, he took shelter inside the Golden Temple in Amritsar -- a site sacred to the Sikhs. From the Temple, the Sikh militants conducted their political, religious and military insurgency. Indira Gandhi ordered the Indian Army into the temple to dislodge the militants on 6 June 1984 in a military raid called "Operation Bluestar." Under the Sikh faith, the entry of the Indian Army into the Temple meant that the Golden Temple was desecrated. On 31 October 1984, Indira Gandhi was assassinated by her Sikh bodyguards, and a civil war erupted in the Indian Punjab pitting the Indian government against the Sikh separatists who sought to create an independent "Khalistan."³⁷

Punjab began to descend into chaos, and by May 1987, the moderate *Akali Dal* government was dismissed and "President's Rule" or the suspension of an Indian state's

³⁷Varshney, "Contested Meanings," pp. 337-362, Infotrac Edition, p. 15.

autonomy was established. President's Rule lasted 57 months in Punjab, but the Indian government was able to crush the Sikh insurgency. India accomplished this through a ruthless anti-militant campaign conducted by Punjab's Chief of Police, K. P. S. Gill. Gill's methods were described by many as the imposition of a "Police *Raj*" on the Indian Punjab. By the middle of 1992, it became apparent that the Sikh separatists were losing the war. Their demise was hastened and perhaps caused by the social structures of rural Punjab. The guerillas wove themselves into the social fabric of the *Jat* Sikh peasantry of the state. This meant that they became actors in rural kinship feuds, rivalries and business deals, thereby creating allies for the Indian government's forces within the very communities they championed. By 1993, a transitional election with very low turnout was held in the state, but the war and the troubles of the state had died down. Punjabis, of all religious communities, were celebrating the return of "egg, leg and peg."³⁸ Today, Punjab is the wealthiest state in India thanks to the Green Revolution.

The conflict in the Punjab was a direct result on the invasion of the Golden Temple by the Indian army. The demand for more water by the government of Punjab did not result in conflict. The demand for more water was a part of a matrix of demands that included more support from New Delhi. Ironically, giving in to the demands of the moderate Sikh government may well have increased its dependence on New Delhi, thereby accomplishing the very goal that attracted Indira Gandhi to Sikh radicalism. There may have been other reasons for Mrs. Gandhi's tilt towards Sikh radicalism. According to Varshney's work for *Daedalus*, towards the end of her life, Mrs. Gandhi

³⁸*Economist*, "Peace at Last in Punjab: India," Vol. 327, No. 7812 (22 May 1993), p. 45; Gurharpal Singh, "Punjab since 1984: Disorder, Order, and Legitimacy," *Asian Survey*, Vol. 36, No. 4 (April 1996), pp. 410-422, Infotrac Edition, pp. 3-5.

became increasingly religious. Sikhism is an offshoot of Hinduism, but whether Mrs. Gandhi personally developed an interest in the faith is not known. After the invasion of the temple and the assassination of Mrs. Gandhi, however, the Sikh and Hindu communities in India experienced a fallout that took many years to patch and may be impossible to heal completely. The explosion of Punjab in the aftermath of Operation Bluestar proves that the conflict in the Punjab had nothing to do with the state's water demands. The Punjab crisis shows that disputes over water do not necessarily lead to serious conflict and are generally insufficient to ignite a war. People lift rifles, put their lives at risk and rise against their states or against outside states for reasons that are closer to the cores of their souls such as their language, their culture and their faith. In other words, people are always capable of dividing water but no one has yet calculated how to compromise on identity, especially when sacred sites and a political expression of faith are in question. Put another way, no recent or current major conflict has been or is free from religious and linguistic factors.

KARACHI, SINDH AND PAKISTANI PUNJAB

At first glance, Pakistan may appear religiously homogenous compared to India. Yet, the country is riddled by both religious and ethnic conflict. The city of Karachi alone has two ongoing separate conflicts. The first conflict is a complicated three-way affair pitting Sindhi nationalists against two warring Mohajir (Urdu-speaking immigrant communities originally from India) factions. The second conflict features a Shiite/Sunni (especially Wahabi) fault line. With two separate wars fought between multiple factions, Karachi, Pakistan's largest city, has witnessed its descent into chaos and anarchy that approximate Hobbes' state of nature. Analysts for *Jane's Intelligence Review* call the

situation in Karachi and increasingly the rest of Pakistan "Kalashnikov Culture." This "culture" seeped in from Afghanistan and the NWFP into Karachi and is now spreading to Pakistani Punjab. The problems are further compounded by Indian support for some of these groups in retaliation for Pakistan's support for militants in Kashmir. The Sunni/Shiite conflict is easier to detail and its origins are clearer. It began as a consequence of government policy. During the 1970s, Pakistani President Zia ul-Haq proposed a Sunni-style *zakat* (alms) tax. Concerned that their religious views are being relegated to secondary status, Pakistani Shiites formed the *Tehrik-e Nefaz Figh-e Jafaria* (TNFJ -- The Movement for the Defense of Jafari Jurisprudence). When neighboring Iran exploded in an Islamic Shiite revolution, the TNFJ received Iranian support and was renamed *Tehrik-e-Jafaria Pakistan* (TJP -- Pakistani Shiite Movement). The appearance of the TJP coincided with the war in Afghanistan and the rise of Sunni religious schools in Pakistan. These students attracted the sons of the impoverished. Aided by Saudi Arabia and with affiliates in Afghanistan and Kashmir, several Sunni parties began to recruit the seminarians for the wars in Afghanistan and Kashmir. These Sunni groups are too numerous to list, but the most important ones are the *Sipah-e-Sahaba Pakistan* (SSP - Society for the Companions of the Prophet Pakistan) and *Jama'at-e-Islami* (Islamic Group). With the both Muslim communities organized into paramilitary parties, the gunpowder was mixed for conflict. The spark took the form of the Iran-Iraq war. The struggle between Sadaam and Khomeini spilled into the streets of Karachi pitting the TJP and its hyper-radical offspring, the Shiite *Sipah-e Mohammed* (Society of Mohammed) against the Sunni organizations. These groups attack each others's leadership clusters

and include whole tribes in the NWFP as well as sections of the Punjab. While Karachi is the center of the conflict, the Shia-Sunni conflict has spread into Pakistani Punjab.³⁹

Religious conflict in Pakistan continues in a parallel manner to ethnic conflict. The *Mohajir* community of Karachi is divided between two factions of its original political party, the *Mohajir Qaumi Movement* (Mohajir National Movement MQM). The mainstream part of the party has been renamed the *Muttahida (United) Qaumi Movement* and the rump, which receives support from India is now called *Mohajir Qaumi Movement -Haqiqi* (The "real" MQM). The MQM-Haqiqi is led by Mr. Altaf Hussein from exile in London. The two factions have been locked in armed struggle against each other, killing each other's leaders and members. Outside the cities of Sindh, Sindhis remain an overwhelming majority. Ethnic animosity exists between Sindhis and Mohajirs and a secessionist organization called *Jeay Sindh* carries out guerilla activities against the Pakistani government and the Mohajir community. Increasingly, gunmen are also serving their own interests through involvement in crime and corruption, and the level of violence is rising as a result.⁴⁰

The internal conflicts in Pakistan are about ethnicity, power and religion. It is noteworthy that the Pakistani provinces have had disputes over the distribution of water, with the smaller provinces protesting the lion's share used by Punjab. The dispute over water has had no impact on the conflicts. Pakistan's internal conflicts erupted for reasons far removed from water. Pakistan's experience with ethnic and religious conflict

³⁹Anthony Davis, "Pakistan: State of Unrest," *Jane's Intelligence Review*, Vol. 11, No. 1 (January 1999), pp. 33-36.

⁴⁰Ibid.

suggests that the country is not able to control itself. Unlike India which was successful in Punjab and earlier in Assam, Pakistan has not yet pacified any of its troubled regions. The invasion of Kashmir may have been an attempt to gain some control not necessarily over Kashmir but over Karachi by presenting Pakistanis with an issue that they could all agree about. Pakistan's instability was predicted by the very British officials who hand in creating it. Without the depth and population of India or the expanses of Iran, Pakistan is ultimately a vulnerable enclave. Iran can easily destabilize the country by arming its Shiite community (perhaps 22-25 percent of the population), and India is already destabilizing it in retaliation for Pakistan's support for Kashmiri separatists. The Soviet experience shows that nuclear weapons are useless against ethnic and religious separatists, so the utility of the Pakistani nuclear explosions is like rain-less thunder. The country's support for the Afghan Taliban, on the other hand, gives the country a much needed ally.

AFGHANISTAN'S WARS

Afghanistan was born in the 18th century as a reaction against dominance by Iran. Its kings kept Russia and Britain at bay. Afghanistan is one of the few Third World countries to avoid European colonial domination. It is also one of an even smaller number of Third World countries that have been able to defeat, albeit at great cost, invasions by more than one great power. Afghanistan pushed back Britain twice and the Soviets once. It also escaped Imperial Russia's encroachments and Iran's desire to reestablish its sovereignty over its territory. Like India, Iran and Pakistan, Afghanistan is a multiethnic state. The country's internal ethnic and religious divisions have played a major role in both its ongoing civil war and its resistance to the Iran, Imperial Russia,

Britain and the Soviet Union. Having had the will, courage and ability to resist foreign domination, Afghanistan did not enjoy the subtle but real benefits of colonialism which include the creation of a modernized bureaucratic elite, modernized educational systems and connections with the outside world. Naturally, the country benefitted from avoiding the disruptions of colonialism, but it needed the reforms and changes colonialism brought. So in 1929, King Amanullah attempted to persuade the tribes to accept change. He convened the *Loya Jirga*, the traditional Afghan assembly of tribal chieftains, for a three day lecture on the need to reform the country. The tribes responded by revolting and overthrowing the reform-minded monarch. The results of the conservative revolt of 1929 can be felt to this day. Having failed at grass-roots modernization, Afghanistan developed two small educated elite cliques. One elite group looked toward Pakistan, Egypt, Saudi Arabia and Iran for models and ideas. Initially, it included modernizers as well as Islamic fundamentalists, but it increasingly became fundamentalist in view and orientation. The second turned to the Soviet Union and Marxism for its ideas and models. Both groups agreed on one thing: Afghanistan must be changed and that this change must be directed by the government. In other words, the government was to force people to change. Naturally, this was bound to attract resistance from both the other elite group and the population at large. The monarchy was overthrown by a member of the royal family who established a republic with the backing of one of the factions inside the People's Democratic Party of Afghanistan (The Afghan Communist Party). But by 1978, the PDPA's militant Communist Khalqi (a Pakhtun-dominated group) took over the country in a coup. The Khalqi faction sought to impose Marxism on a society that was pre-feudal at best. The predictable resulting chaos and instability prompted the Soviet

Union to invade and replace the Khalqi faction with another, more flexible faction, in December 1979. According to Fred Halliday, the internal coup within the PDPA and the associated Soviet invasion unleashed three forms of anti-Soviet Afghan nationalism: a pan-Islamic nationalism centered around "defending Islam," ethnic nationalism (Pakhtun, Tajik, Hazara, and Uzbek) sometimes also using the language and symbols of Islam, and the nationalism of the communist factions that were out of favor with Moscow. Pakistan favored working with Islamic Pakhtun-based groups and the United States allowed Pakistan to channel aid according to its priorities. According to Robert Gates, former director of the Central Intelligence Agency, it did not matter who was getting the aid as long as they accomplished the goal of "killing Russians." Moderate Islamic and Monarchist anti-Soviet groups were not only denied military aid, but saw their leaders assassinated and their organizations shattered by Pakistani-aided groups. The king was (and probably is) more popular than the various Islamic guerilla faction, but the rural people of Afghanistan stood the Islamic guerilla groups anyway. In a dramatic repeat of history, the people of Afghanistan defeated a superpower and forced it to depart. After suffering 15,000 casualties and the loss of hundreds of aircraft, the Soviets left early in 1989. With the Soviets gone, the Khalqi faction attempted a coup, but the more moderate Communists defeated them and forced them to take shelter in Pakistan. Once in Pakistan, the Khalqis made common cause with their fellow Pakhtuns -- the Taliban. The Taliban Air Force and the movement's armored units are manned by the Khalqis.⁴¹

⁴¹Fred Halliday, "The Un-Great Game: the Country That Lost the Cold War. (Afghanistan)," *The New Republic*, Vol. 214, No. 12 (25 March 1996), pp. 38-43.

The Taliban took advantage of the collapse of the Soviet Union and the placement of a relatively weak mujahedeen government at the helm in Kabul. Using the camps established by the Central Intelligence Agency in Pakistan, the organization invaded the country and eliminated or absorbed other Pakhtun factions in the country. Only the Tajik-dominated Panj Shir (Five Lion) valley escaped their rule and is still being administered by the internationally recognized Afghan Mujahedeen government. The Taliban had worked with Osama bin Laden to raise funds and to bring Arab Muslim volunteers to Afghanistan to "kill Russians." After taking over 90 percent of the country, they offered Osama bin Laden a base of operations after he was exiled from Saudi Arabia and expelled from the Sudan. After the Gulf War, the United States stationed troops in Saudi Arabia. Bin Laden persuaded himself that his country was occupied by "Zionist Crusaders," and began a terrorism program that resulted in the deaths of hundreds of Americans, Tanzanians and Kenyans in the explosions at the Khobar towers in Saudi Arabia and the two embassies in Africa. Today, bin Laden's organization operates in dozens of countries including China and the United States. It is a direct consequence of the Afghan policy created by Zbigniew Brzezinski and continued by the Reagan administration. Richard Murphy, Reagan's Assistant Secretary of State for the Near East and South Asia, put it best when he said: "we did spawn a monster in Afghanistan."⁴²

The policy, with hindsight, can also be judged as a failure in another crucial respect. The aid to the Mujahedeen was designed to expel "the Russians" from Central Asia and replace the Communist governments of the five Central Asian republics and oil-

⁴²Dilip Hiro, "The Cost of an Afghan 'Victory,'" *The Nation*, Vol. 268, No. 6 (15 February 1999), p. 17.

rich Azerbaijan with pro-Western Islamic nationalist governments. With the collapse of the Soviet Union, these states not only retained their Communist elites, they have become the objects of American courtship. Ironically, Taliban is now an unmitigated threat to their existence. The policy of confronting the Soviets in Afghanistan and the failure to engage the Afghan government after their departure has shown itself to be harmful to United States interests, because it allowed for the creation of Taliban and provided bin Laden and thousands of like-minded people with arms, training and military experience.⁴³ This suggests that military aid policies created without careful examination of the ideologies and aims of the aid's recipients are likely to backfire. Russophobia is not a substitute for *good information* and *tight control* over the parties getting United States assistance whether they are allied states, other states or non-state actors capable of independent military action.

As Halliday argues, the wars in Afghanistan are far from over. It is more than likely that the Taliban will fragment themselves with the former Khalqis forming a "Socialist Islamic" faction. Iran continues to support the Hazara Shiite Mujahedeen, while Russia, Tajikistan and Uzbekistan will probably continue to back Ahmed Shah Masood's Tajiks. Taliban has also alienated Iran by murdering Iranian diplomats in Afghanistan. The ordinary people of that country will continue to pay a heavy price for the strategies and political power plays created in Moscow, Islamabad, Tehran, Riyadh and Washington. These wars have already "spilled over" to Africa and Russia in the form of terrorist attacks against American embassies and territorial incursions against Russian Daghestan. The Soviet invasion was motivated by a desire to consolidate a new

⁴³Halliday, "The Un-Great Game," pp. 38-43.

communist country, and the resistance to the Soviets was motivated by nationalism. America's motives were clear, as were Pakistan's goals. Control over the Indus waters played no role in the country's wars. The waters of the Kabul tributary were never an issue between Pakistan and Afghanistan, and Pakistan's policies in the country were clearly linked to religious-political considerations rather than a calculated policy to control the Kabul river. It is important to remember that most of the Islamic political movements in Pakistan have affiliates in Afghanistan, thus conflict will inevitably be spilling from each country into the other until social change relegates religion to the margins of political life in all three countries.

IDENTITY

INDIA AND PAKISTAN

Relegating religion to the margins of political life will be very difficult for Pakistan. The country shares a long colonial and pre-colonial past with both Britain and India, and as a result, its founding was directly influenced by the difficult political choices made by the British, the leadership of the Indian Congress Party and the Mohammad Ali Jinnah – then the leader of Muslim League of India. The conventional view, that is the historical interpretation that suits most factions, is that Jinnah pushed for and secured the creation of Pakistan on the basis of his "two nations theory." The reality, as always, is more complex. First and foremost, Jinnah was a victim of his own rhetoric. His "two nations" arguments were designed to secure from the Indian Congress Party a united India in which Muslims would have an equal say in the government with the Hindu majority. He was outsmarted by Congress, which despite Gandhi's pleas to the

contrary, wanted partition. Understanding the partition process is crucial to understanding the national identities of India and Pakistan and the core of their dispute over Kashmir. The partition was not a smooth process, and its scars run deep in both countries. Its human costs need to be explained and their inevitable contribution to the difficulties in the relationship needs to be acknowledged.

Partition really began during World War II. The Indian Congress party, which dominated the provincial governments, wanted India to remain neutral. The Viceroy of India, acting in place of the Indian emperor (the British monarch), declared war on India's behalf. With Congress opposing the war, the only remaining all-India organization was Jinnah's Muslim League. With Muslims composing half of the army, the British needed Jinnah's cooperation. A day after the declaration of war, the Viceroy invited Gandhi and Jinnah to the palace. The move gave Jinnah a degree of visibility and importance that his hitherto small party did not have. Encouraged, Jinnah's Muslim League adopted the "Two Nation" theory at its next conference in Lahore. The resolution meant that India's Muslims refused to live in a state with a Hindu majority. "State" did not necessarily mean an independent Muslim state or states in an international sense. The Lahore Pakistan resolution of the Muslim League was deliberately vague:

... that no constitutional plan would be workable in this country or acceptable to the Muslims unless it is designed on the following principles, viz., that geographically contiguous units are demarcated into regions which should be so constituted ... that the areas in which the Muslims are numerically in a majority, as in the North-Western and Eastern zones of India, should be grouped to constitute Independent States in which the constituent units shall be autonomous and sovereign.⁴⁴

⁴⁴Muslim League of India, "Lahore Resolution," as cited by Francis Robinson, "The Muslims and Partition," *History Today*, Vol. 47, No. 9 (September 1997), pp. 40-47, Infotrac Edition, pp. 8-9.

The resolution leaves the issue of separation from India unanswered. Were these states to become independent outside India or "autonomous and sovereign" within it? Jinnah's goal seems to have been a united India, with Muslim states within it and about half the power at the center reserved for Muslims. In 1942, with the Japanese bombing Calcutta and the war progressing poorly for Britain, Jinnah was offered a Pakistan state by the British. The move drove Congress over the edge. It began an open revolt against the British called the "Quit India" movement. This was a step beyond the resignations of the Congress governments in 1939 to protest India's entry into World War II. Congress' opposition to the war landed its leadership, including Nehru, and some 60,000 of its activists in prison. In view of Congress' later acceptance of partition, the British offer of a Pakistan to Jinnah seems to have been a convenient pre-text for Congress' revolt. But the revolt proved utterly catastrophic for Congress, and the Muslim League emerged as the only viable all-India political organization. In 1946, Jinnah became the undisputed spokesman for Muslim India when his party won over 90 percent of Muslim seats in provincial elections. The Labor government in Britain essentially proposed what Jinnah wanted. India was to become a union of two federal states, one for each major faith. On 6 June 1946, Jinnah accepted this plan. Congress also accepted this plan, but refused to accept an interim government to execute it. In essence, Congress' response was "yes, but no." Congress' motives were partially economic and partially nationalistic. Nehru wanted to put his Fabian socialist ideas into effect, and the power of Muslim landlords would have certainly been a problem. A second major leader of the Indian National Congress Party, Vallabhbhai Patel, wanted India to have a powerful central government, and communal federations certainly were not conducive to his centralizing plan. It is this

reality that faced Moutbatten when he arrived in India in February 1947, and attempted to prevent further catastrophe by excluding the Hindu and Sikh majority areas of Punjab and Bengal from Pakistan. When the Muslim League and Jinnah protested the exclusion of what became the Indian states of West Bengal, Himchal Pradesh, Harayana and Punjab from Pakistan, Moutbatten and the British responded by using the League's own "Two-Nation" rhetoric. Jinnah unhappily accepted what he termed "truncated or mutilated and moth-ridden Pakistan."⁴⁵

Having been dealt a poor hand, Jinnah attempted to make the best of the situation.

He told the subcontinent's Muslim masses that they were different and special:

We are a nation . . . with our own distinctive culture and civilization, language and literature, art and architecture, names and nomenclature, sense of value and proportion, legal laws and moral code, customs and calendar, history and tradition, aptitudes and ambitions; in short, we have our own distinctive outlook on life and of life.⁴⁶

For Jinnah, Islam was what made Pakistan different from India. To leave Muslim majority areas within India meant the negation of the justification of a separate Pakistan. Kashmir has become an intractable conflict, because the Vale is viewed as an inherent part of Pakistan by Islamabad. After all, the "k" in Pakistan stands for Kashmir. The independence-oriented JKLF is unwelcome in Pakistan, because it stands for a cause as abhorrent to Pakistan as the retention of Kashmir within India. While Islam retains a great deal of power in the realm of Pakistani politics, it has failed to protect the country from internal strife resulting from denominational and ethnic divisions. The spectacular

⁴⁵Ibid.

⁴⁶Muhammad Ali Jinnah, as cited by *Economist*, "Has Anybody Seen Our Future? The Islamic Republic of Pakistan Has Lost its Way," Vol. 321, No. 7734 (23 November 1991), p. 21.

independence of Bangladesh in 1971 and the constant blood-letting in Karachi testify to the failure of the Pakistani government's nation-making efforts. Kashmir has also become more useful as the internal divisions within Pakistan mounted. It provides an anti-Indian focus for the Muslim people of Pakistan. In their hostility to India and desire to "liberate" Kashmir, Pakistanis of all ethnic and religious groups find concord. The question of Pakistan's identity, and not the waters of the Indus, has caused most of the wars in the basin.

The partition was not a velvet divorce. It was major surgery without anaesthesia. Muslims and Hindus had lived inter-connected, albeit it not always serene, lives. Clans, castes and tribes had Hindu, Sikh and Muslim branches which interacted economically, socially and personally. The movement of populations continued well into the fifties. It meant the movement of 12.5-13 million people and the death of hundreds of thousands of Hindus, Muslims and Sikhs in communal riots. The partition was accompanied with the annexation of the Princely states into India and Pakistan. The most important state, Hyderabad, was ruled by a Shiite *Nizam* -- ruler. The Nizam owned vast mango plantations and supported a significant percentage of his state's population with the revenues. The absorption of Hyderabad into India and Congress' ill-devised land reform programs led to the decimation of the former state's Muslim middle classes and the end of its lucrative mango exports. With the disappearance of their revenue streams, many Muslim ex-landlords moved to Pakistan angry at Nehru and India for depriving of their lands. Lands that were left in the hands of Muslim landlords were declared "enemy property" if the owner, or a part of his or her family, moved to Pakistan. A similar fate awaited Hindus who lived in Pakistan. In short, the partition was a difficult process that

claimed the lives, the wealth and the well being of millions of people. The pain of partition was further compounded with the economic policies of India and the hostility towards Hindus in Pakistan. A Muslim historian, Mushirul Hasan, argues that the "Two Nation" theory must be repudiated, because "the Hindu and Muslim communities lived together in peace and amity."⁴⁷

Until the relatively recent rise of the Hindu-nationalist Bharatiya Janata Party (BJP), the viewpoint expressed by Hasan was the official approach of India towards its identity. At independence, India refused to become Hindustan. The country retained the name "Bharat" in Hindi and "India" in English. Jawaharlal Nehru, India's leader at independence, viewed India as territorial and cultural entity -- not a religious one. In fact, Hinduism was absent from Nehru's concept of India:

When I think of India, I think of broad fields dotted with innumerable small villages . . . of the magic of the rainy season which pours life into the dry parched-up land and converts it suddenly into a glistening expanse of beauty and greenery, or great rivers and flowing water . . . of the southern tip of India . . . and above all, of the Himalayas, snow-capped, or some mountain valley in Kashmir in the spring, covered with new flowers and a brook bubbling and gurgling through it.⁴⁸

For Nehru, to be Indian was a question of belonging to a culture defined by boundaries created by nature, and faith did not matter. One could belong to any religion and be an Indian. Nehru was irreligious, but his views were shared by Gandhi, who was motivated by religious considerations. Gandhi believed that Hinduism enjoined tolerance. Ironically, it was Gandhi's very religious orientation towards tolerance that made him

⁴⁷Mushirul Hasan, "Partition: the Human Cost," *History Today*, Vol. 47, No. 9 (September 1997), pp. 47-54.

⁴⁸Jawaharlal Nehru, *The Discovery of India* (Delhi: Oxford University Press, 1989), p. 63.

suspect in the eyes in India's Muslims. Gandhi was a nationalist and a devout Hindu, but he was not a Hindu nationalist. Nevertheless, his use of Hindu ideas and principles alienated the Muslim community and led to some of the early divisions between the two communities. Gandhi responded to the Muslims' suspicions with open arms, rendering him an anathema to the Hindu nationalists. It was a exactly such a Hindu nationalist who murdered Gandhi. The murder of the Mahatma set back the cause of the Hindu nationalists for decades.⁴⁹

Within the context of the secular, territorial national identity established by Nehru and Gandhi, Kashmir acquired extraordinary importance. It was the only part of India that retained a Muslim majority. It manifested India's claims of commitment to a secular inclusive state and its claimed rejection of the "Two Nation" theory. India also argued that the presence of Kashmir within India guaranteed a secular India, which is in the interests of its Muslim community. As a result, both India and Pakistan regard the disputed region as a crucial part of the composition of their identities.⁵⁰ The partition of Kashmir is the only viable solution, because it would require compromise on both sides. Furthermore, it is doubtful whether Pakistan, given its deep internal divisions, could survive an Indian withdrawal from Kashmir; a key rallying cry would be gone, and the country would face a near total collapse of inter-ethnic and inter-denominational concord.

Due to Kashmir and the construction of their respective national identities, India and Pakistan regard each other as "the other." This should be self-evident and needs no

⁴⁹Varshney, "Contested Meanings," Infotrac Edition, p. 4..

⁵⁰Robert L. Hardgrave Jr., "India: The Dilemmas of Diversity," *Journal of Democracy*, Vol. 4, No. 4 (4 October 1993), pp. 54-68.

further clarification. Despite the country's commitment to secularism, India's sense of national identity is gradually changing. India is slowly becoming a Hindu state. The shift has manifested itself in the rise of the BJP. The Hindu-centric definition of Indian identity is as old as the secular tradition embodied by Nehru. The *Rashtriya Swamyamsevak Sangh* (RSS -- National Voluntary Corp) was established in 1925 in Maharashtra to resist the British and revive Hindu culture. It represents the institutional core of the Hindu nationalist movement. The Hindu nationalists regard "Indian" and "Hindu" as interchangeable terms. According to the movement's founding thinker, Savarkar, "a Hindu means a person who regards this land . . . From the Indus to the Seas as his fatherland as well as his Holyland." For the BJP, Hinduism is culture as well as faith, and the physical geography of India is a sacred geography. Unlike other religious political movements, the BJP regards Muslims, Christians, Sikhs and others as a part of the Indian national community *provided that members of these minority communities accept certain principles*. For non-Muslim minorities, this means straightforward acceptance of the crucial role of Hinduism in Indian civilization or assimilation into the Indian Hindu mainstream. Indian Jews and Zoroastrians are regarded as integrated into the Indian mainstream. Indian Christianity became largely apolitical with the departure of the British. The only remaining unintegrated minority faith, in the view of the Hindu nationalists, is Islam. Muslims are expected to accept the centrality of Hinduism in Indian life. Muslims are to accept Hindu figures like Ram as civilizational rather religious figures, the fact that India's Muslim rulers inflicted great damage upon Indian civilization, and they are to refrain from claiming any special protections and privileges on the basis of their faith. These arguments threaten to overwhelm the distinctions

between Muslims who regard Islam as a personal faith and those who regard it as a political ideology, rendering a confrontation between the Hindu nationalist movement and the Indian Muslim community increasingly likely. The BJP is the governing party in India at the time of writing, its support has risen from 7 percent between 1948 and 1988 to some 26 percent in 1998. The party won the most elections easily. The rise of the party inevitably means increased pressure on India's remaining Muslims to accept a degree of assimilation or immigrate, but some Indian Muslim politicians accept the BJP's reading of Indian history and its interpretation of Indian identity. The BJP itself faces pressure from parties espousing harsher varieties of Hindu nationalism, and in many ways, the destruction of the *Babri* Mosque/Ram Temple at Ayodhya represented a breakdown in party discipline. The pressure to strip India's Muslims from their special privileges is rising and is bound to cause further riots, further confrontation and more Indo-Pakistani conflicts.⁵¹

In the end, India's Muslims will have to accept living as a relatively powerless minority in a Hindu-dominated India or immigrate to Pakistan and become *Mohajirs*. It is not a position to which Muslims are accustomed, and their adjustment to voicelessness will be very difficult but inevitable. In many ways, the BJP represents Hindu wholehearted acceptance of Jinnah's "Two Nation" theory, so Jinnah's rhetoric is still being played back to Pakistan. India's political leadership faces dozens of internal ethnic, caste and linguistic differences, and the temptation to use all-Indian symbols, myths and images will only increase. This means that the government will try to coopt Hindu symbols. Unlike Pakistan, India has a solid record of preventing ethnic secession and

⁵¹Varshney, "Contested Meanings," Infotrac Edition, pp. 3, 4, 8, 9, 10, 18.

pacifying rebellious provinces, but it needs a national mythology and a clear national identity to replace the dying secular nationalism championed by Nehru's Congress. Viewed from this perspective, partition is still on the national agenda of both India and Pakistan. It is not a historic event but an active and on-going process. The sad irony is that Muslims are producing India's best movies, playing its best music, leading its cricket teams and even designing the nuclear weapons and missiles it targets at Pakistan. The national identities of India and Pakistan are deeply intertwined, and they play an important role in each other's demonologies. Pakistan, lacking support in the JKLF-supporting parts of the Kashmiri Muslim community, is not likely to win the conflict in Kashmir. India may coopt the JKLF and the Kashmiri Muslims or may even grant the Vale independence as a *de facto* protectorate. In either case, Pakistan stands to lose its game in Kashmir. This suggests that Pakistan is likely to undergo severe centrifugal pressures that may lead to its breakup. India's Hinduism has the advantage of having thousands of sects, rendering interdenominational conflict nearly meaningless; Islam's sects, on the other hand, are far fewer with their respective differences formalized and highlighted along the Sunni and Shiite tracks.

AFGHANISTAN

Afghanistan's tragic present is likely to become Pakistan's unhappy future. Self-righteous movements like Taliban are not given to kissing the hands that feed them. Their interests extend into Pakistan's Northwest Frontier Province "Pakhtunkhwa," and sooner or later they are likely to assert the traditional Afghan claims to the province. Like Pakistan, all non-communist Afghan governments have used Islam in an attempt to unite the country. Unfortunately, these governments have also followed Pakistan's path

to failure in this endeavor. In fact, the Taliban foreign policy represents the clash of Islams. The regime has made an enemy out of Iran by executing Iranian diplomats and oppressing the Shiite Afghan Hazara community. Its primary backers are Saudi Arabia, the United Arab Emirates and Pakistan -- countries led by Sunni (especially Wahabi) elites.

CONCLUSION

Water is also not an object in the Indus basin, but the conflicts continue. A simplistic approach would entail saying that India and Pakistan are fighting for the territory of Kashmir. But such an argument requires the consideration of religion in order to make an analysis of the conflict's causes coherent. The regime of the Indus was constructed, maintained and developed while Pakistan and India fought several wars, developed nuclear weapons, and continued to confront each other in a wide variety of ways. The hydraulic inter-dependence between the two countries did not lead to peaceful relations.

The constant conflict between India and Pakistan confirms the validity of the central point of this dissertation: Identity issues cause war, water does not. Broadly put, the tragedy of India and Pakistan correlates, in general, with the friction between Hindu and Islamic populations. While the two communities lived side by side for centuries in peace, they also lived with conflict and estrangement to some extent. The division of India into Muslim and Hindu resulted in alienation between the two communities. This estrangement took the shape of separate marriage patterns, holy lands and economic opportunities. Yet to fixate on Hindu-Muslim divisions can lead us down logical

pathways that risk oversimplification. Any analysis of the Indus basin needs to look at the clash of Islams and the clash of various concepts the Indian national identity.

The absence of water as a cause of Indo-Pakistan conflict is very clear. This case study separates disputes over river water from conflict once and for all. The case study is also a cautionary tale about the limits of cooperation in hydraulic matters. Countries may solve their water disputes and have conflicts anyway. This strongly suggests that water is an arena of conflict between states and peoples rather than a cause of conflicts. In its own optimistic way, the case study shows that people fight and die for goals other than water.

The hostility between India and Pakistan is about the creation of two national communities through the device of exclusion of "the other" from the national community and through the definition of the national community along religious-cultural lines in both countries. India attempted to become a secular state, but it was hobbled with two crucial handicaps in its quest for a secular existence. First, Gandhi used Hinduism to build the Indian National Congress, thus making the party unacceptable to most Muslims in the pre-independence period. Second, the country chose to follow an almost Lebanese-style of secularism. Under this form of secularism, the state supports all religions instead of withdrawing from the sacred realm. Invariably, this leads to comparisons; each community feels that the state favors other communities. As a result, politics becomes increasingly infused with religion. The study confirms the results of the Nile and Tigris-Euphrates case studies. Disputes over the waters of the Indus did not contribute to Indo-Pakistani conflict.

The mainstream literature in this field focused in on the water dispute as a causative factor in intra-basin conflict. Water disputes are linked to conflict, but in the

reverse order of causality. Conflict seems to cause water disputes rather than *vice versa*. Conflict is not a disagreement between friends. Conflict stems from viewing the other part as a threat to one's self-image and self-interpretation. The problems between India and Pakistan are also compounded by the construction of national ideologies around each identity. Given its internal divisions, Pakistan would have to invent India if it did not have it as a neighbor. Ideology, especially the non-economic variety, often creates immense conflicts. "Hindutva," "the two nation theory," and "secular India" are attempts to give the state logical coherence. In all three cases, however, this coherence is gained at the expense of creating an outside enemy and an "internal fifth column" seen as aligned with that external enemy. Internal factors, particularly those related to identity and culture, seem to exert a powerful influence over the foreign policies of the various states on the Indus River. This confirms the findings in the Nile and the Tigris-Euphrates basins where the various states and peoples are undergoing similar difficulties.

CHAPTER VI

CONCLUSION

The case studies lead to one clear conclusion: the mainstream school's core assumption, that water disputes cause conflict, is flawed and must be strictly scrutinized. Of course, this does not imply that the mainstream school fails to make any contributions to the field. In terms of cataloging information, defining basins and bringing attention to the study of international river systems, the contributions of the mainstream school are significant. The alternative school, on the other hand, takes a more thoughtful approach. It questions the relationship between water disputes and conflict, and in doing so, reveals that national reconciliation among and within states is a precondition for peace.

The Indus River case study stands as a strong cautionary tale about the limits of ascribing conflict-causation to water disputes. In that case study, the conflict between India and Pakistan continued despite a bilaterally-accepted allocative water regime on the Indus. The Eisenhower administration attempted to use the development of the Indus River as a vehicle for peace between the India and Pakistan, but it succeeded only in taking Indus River water out of the overall Indo-Pakistani conflict which continues unabated.

Conflict is not influenced by the location of a basin's dominant country. In the Nile Basin, Egypt is the downstream riparian, but it has been able to impose its will on the river. With regard to its Nile policy, Egypt is not motivated by rational hydrology but by issues of identity. As a result, Egypt selected the most inefficient solution to its

flooding and irrigation problems, but, Egypt's case is not unique. Turkey is the dominant power on the Euphrates and it is also an upstream country where dam development is favored by hydrology due to low seepage and evaporation rates in cool highland areas. Turkey's decision to unilaterally develop its share of the two river systems came at an immense political price in terms of the country's relationship with Syria and the rest of the Arab world. While the dams were a sound idea from a hydrological view, they were extremely expensive to build and probably uneconomical under normal circumstances. Turkey's decision to build the dams was at least partially motivated by a desire to negatively reward Syria for its "betrayal" of Turkey in World War I, and it was also motivated by plans to assimilate the Kurds of Southeast Turkey into Turkish society. As with Egypt, the choice to build had little to do with the effectiveness of the dams. The hydrological effectiveness of the GAP dams is coincidental. The dams on the Indus River, despite their rising inefficiency in Pakistan, are similar in some ways to the dams of the GAP. They are mostly located upstream. Like Turkey, India is a dominant upstream country that is at constant conflict with a weaker and perhaps overambitious downstream neighbor. In both the Indus and Tigris-Euphrates basins, the weaker states and non-state actors attempt to use unconventional warfare against the dominant state in pursuit of non-hydraulic, identity interests. The Indo-Pakistani water dispute was resolved during the sixties but the conflict continued. It is almost certain that the creation of an allocative regime in the Tigris-Euphrates Basin will not remove the underlying causes of Tuco-Syrian conflict. Given the mix of outcomes in the case studies, it is safe to discount states' riparian location as predictive in terms of constructing regimes or initiating conflict.

Identity factors are more important in terms of causing conflicts and regimes.

Regimes were constructed for managing the waters of the Nile and the Indus among countries that had a degree of commonality in terms of language and culture. Arabic is the dominant language of Egypt and Northern Sudan. India and Pakistan also share common languages. They also shared a common pre-partition British-controlled bureaucracy. As a result, the four countries have maintained their river regimes intact since their inception. Turkey and its Arab neighbors, on the other hand, have developed very negative images of each. In its drive to become a part of Europe, Turkey made an assumption that it had to cut its ties with the Arab and Islamic Worlds, including the rivers that bound Turkey (and previous states in the region) to the fertile crescent and ultimately to Arabia and Egypt.

THE ALTERNATIVE SCHOOL LITERATURE

The dissertation confirms the validity of the alternative school's approach. Lowi, Butts and Dowlatyar argue that water has not been an object of war in the past and that the reasons for conflict are more likely to lie elsewhere. Lowi examines how Israel constructs its national identity and the role water plays in Israel's vision of itself. On the whole, the dissertation's findings validate Lowi's approach and confirm her findings of the Jordan and the Euphrates.

Nevertheless, the dissertation finds that a political settlement, which is a first step towards reconciliation, is not necessary for ending water disputes. India and Pakistan have a remarkably effective water allocation regime despite their ceaseless conflict. To that extent, Thomas Naff's call for the construction of freshwater regimes is sound

despite its mainstream school logical basis. Naff tends to operate from a largely realist point of view, but his realism tends to be a of the structural rather than the classical variety.

Applying classical realism implicitly in his article, Ken Butts reaches a conclusion remarkably similar to Lowi's. Butts confines water disputes to the position of being a possible trigger of conflict. He argues that water disputes are not a cause of conflict, and assigns causation to cultural and identity factors, but he does not tell us more about the factors that create these ethnic, religious and racial antagonisms. His approach is directly applicable to Egypt's 19th century foreign policy of imperial expansion, and can provide adequate explanations for Egypt's historical. Going further than either Butts or Lowi, Dolatyar argues that Islamic law enjoins the sharing of water and that conflict in the Middle East is unrelated to water disputes. In essence, he argues that Islamic law was the water regime in the whole region. Dolatyar's approach leads to conclusions that independently confirm the findings of this dissertation.

As Dolatyar implicitly argues, cooperation occurs within well-defined cultural/religious zones. Egypt and Northern Sudan share a language and a dominant faith. In addition they are both uncomfortable with Coptic-dominated Ethiopia. While holding different faiths, India and Pakistan share languages (Punjabi, Urdu/Hindi, Kashmiri) and a common heritage that went undivided until 1947. People outside of the subcontinent think of the two countries' peoples as "South Asians," and regard them as similar in many respects. Common cuisine, common myths, and a common British-style education are powerful aides to cooperative behavior. Of course, the prodding of the Eisenhower administration, the World Bank and donor money was instrumental in

securing what was, up to that point, only potential cooperation.

In contrast, the chasms between Turkey, its Kurds and its Arab neighbors are now very difficult to bridge. Attaturk rejected his country's Islamic heritage and sought to establish a European-style national identity that excluded the Kurds and anyone who cannot say that they are Turkish. By de-Islamizing the Turkish state, Turkish elites have been attempting to cut the religious ties that still bind Turkey to the new Arab states to the south. These ties were already strained by Jamal Pasha's massacres in the fertile crescent and the destruction of the Turkish communities of the Levant, Iraq, Hijaz and Yemen. Many educated Arabs and Turks spoke each other's languages before the First World War, but the new national states ended multilingual education on the basis of fostering national unity. From the three case studies, we can conclude that cooperative behavior requires a certain degree of cultural commonality between the cooperating states. Another difference between the Indus and the Tigris-Euphrates may well lay in the continued presence of the previous imperial power in the basin as an actor. Britain controls no territories on the Indus River today, but Turkey sits on the headwaters of the Tigris and the Euphrates. Any historical analysis that takes issues of national identity into account would probably result in findings that support the alternative school's primary argument about the lack of a link between water disputes and conflict.

THE MAINSTREAM SCHOOL LITERATURE

By assuming a link between water disputes and conflict, the mainstream literature makes a leap of faith. Indeed, Gleick fiats the link rather than examine the historical evidence. The school is also driven by another assumption. It also assumes that

population increases *will* cause future water disputes and conflict. By assigning water dispute-caused conflict to the future and focusing on population as the sole determinant of water use, the mainstream school assumes that in the past, when populations were low, there were few if any water shortages. We know that droughts have been with humanity since its inception. Naturally, the study of conflicts caused by droughts in the past would make an excellent test of the mainstream school's basic assumption, but no such analysis has been conducted. Given the lack of a present link between water and conflict, mainstream school analysts attempt to move water conflicts into the future. But by doing so, they cross the line from argument and logic to prophecy.

The rivers confound the mainstream school's prophecies. The Sudan, Iraq, and Syria act against their hydraulic interests by refusing to cooperate with countries whose interests overlap theirs. In the face of massive demographic increases, Egypt wastes 10-13 cubic kilometers of water a year in order to continue to operate the inefficient Aswan High Dam. The wasted water can meet the needs of Ethiopia and the Great Lakes states and leave a surplus for Egypt. Realizing this water surplus entails storing it in Ethiopia and Lake Victoria. Egypt rejects upstream storage because it rejects Ethiopia (Coptic Christian and Black) and the Great Lakes states (Black and Western Christian) as "others." The Nile has also become the manifestation of Egypt's national identity. The geography created by the Nile forced Egypt's diverse peoples to coexist and mingle. Without the Nile, Egypt would only lack the water for its survival, it would lack the *reason* for its survival. Sadat understood this well, but he responded to this knowledge by embracing a traditional anti-Ethiopian and ultimately and anti-Sudanese perspective. Of course, the irony is that Sadat himself was half-Sudanese. The Sudan's case is even

more tragic than Egypt's. Its attachment to Egypt is killing the country through a senseless series of civil wars that have claimed two million people since 1955 -- or 110 percent of the population of Kosovo. The Sudan is currently undergoing the ecological and social devastation depicted by Thomas Homer-Dixon.

Homer-Dixon's dire environmental prophecies are also taking place in the Syrian and Iraqi shores of the Euphrates. Hundreds of thousands of hectares of land are already poisoned with salt and gypsum. Iraq produces less food today than it did in 1960, but Homer-Dixon's predictions of environmentally-caused conflict have not materialized. Instead, conflict in the basin is caused by three primary factors: Saddam Hussein, the lack of a Kurdish state and Turkey's overbearing regional foreign policy. Turkey's foreign policy is informed with the negative image of the Arab in Turkish culture. Conflict is not taking place to secure more water and better land, it is taking place for the same reasons that drove the Hatfields and the McCoys, the Croats and the Serbs and the Pakistanis and Indians to their rifles. Belonging to an adoptable species, humans learn to adjust to desertification and the poisoning of water supplies through immigration, having fewer children and keeping animals such as camels that withstand the new dry environment. People fight for identity, for faith and for other supposedly "irrational" reasons. They do not fight for water.

IDENTITY AND CONFLICT

Conflict within a country is often a product of inequality within a context of diverse national identities. Inequality is the twin of diversity, because diversity is almost always a consequence of imperial projects which entail one group conquering other

peoples. There is a tendency to regard the lack of conflict between ethnic and religious groups as the equivalent of peace. This is the "they-lived-at-peace" argument which is ultimately an excuse for dismissing study of a region's history and sometimes demonizing one of the parties to the conflict. The Sudanese "lived in peace" with the Egyptians from 1821 until 1881. Of course, this was peace based on Egypt's possession of cannons, musketry and rifles. They again enjoyed "peace" with Egypt between 1899 and 1959. This time, Egyptian guns were supplanted with British ones. The same dismissive argument can be used to ignore the historical and identity-related causes of internal Sudanese and Ethiopian civil wars, ethnic conflict in Eurasia and the Indo-Pakistani conflict. With regard to the Indo-Pakistani conflict, a caveat must be added pointing out that the "Two Nation" theory was imposed by Jinnah and ultimately also the leadership of the Indian National Congress on the people of today's Pakistan. The theory enjoys wide support in Pakistan today. In India, support for Jinnah's theory takes the form of Hindu nationalism, which increasingly replacing Nehru's secular nationalism as the state's ideology. A similar conflict of identities is taking place in the Nile Basin within and between Sudan, Eritrea, Ethiopia, Uganda and even Egypt.

Both cooperation and conflict are taking place along the lines of identity. Muslim and Arabic-speaking Egypt cooperates with the Northern Sudanese despite intense friction between the two states over Halaib and the Sudan's interest in cooperation with Ethiopia in the Blue Nile plains. African, Animist and Christian South Sudan, as represented by the SPLA, finds succor in Uganda and Ethiopia -- countries with an African orientation with dominant Christian communities. Within these last two states, civil wars have also been fought on tribal and religious lines. *Negus Yohannes*

complained bitterly to the German Emperor about being encircled by Muslim powers. The Mahdists' wars against Egypt, Ethiopia, Darfur and the British in Egypt were ultimately motivated by what was, at its core, an innocent desire to save the world from what they regarded as injustice and paganism.

The strongest evidence for the impact of national identity on conflict comes from the confrontation between Turkey, the Kurds and Syria. Turkey's assault against the Kurds and its own Islamic heritage has created a country belonging to neither Europe nor the Middle East. The state is also alienated from the vast traditionalist segment of its own population. Ironically, the former Erbakan government, based on Islamic ideologies distilled from Sufism instead of Wahabism, proved more "European" than the secular government that followed it. His government attempted to end the civil war by recognizing the Kurds' national identity while emphasizing Islam as a unifying factor between Kurds and Turks. Using Islam as a common identity, Erbakan reached out to Syria, the Arab World and Iran. The Turkish Army responded by issuing a *coup* by memorandum. Instead of negotiating, the Army's new puppet government threatened war with Syria. Through its actions, the Turkish Army recreated a chasm that separates Turkey from both Europe and the Middle East. Turkey became an unattached fragment clashing with the Arab Middle East, Iran and Armenia on one side and with Greece on the other. Instead of becoming a bridge, Turkey seems fated to remain an island until Kemalism is dethroned. It remains to be seen whether Attaturk's attempt at constructing a Turkish national identity has taken materialized outside the Turkish Army.

But once a national identity is forged, it becomes real to those who belong to it. In other words, it becomes a critical factor in the domestic arrangements of states and in

International Relations. A country may have a population with more than one identity. For example, Iran is both a Shiite Muslim and a Persian country. Turkey is torn between pro-European Kemalism and its Islamic heritage. Sudan is divided between its Afro-centric South and Arab-centric North. The question of "which identity" could become a tool in and of itself. The mix of cooperation and conflict between India and Pakistan can be understood by asking this question. The national identity of Pakistan is critical to the answer. Today's Pakistan has internalized Jinnah's rhetoric thanks to the pain of partition and the wars with India. Yet, enough of the old Mughal and pan-Indian culture remains to make cooperation with India possible in some matters. Only in India can Pakistanis find people who speak three of Pakistan's dominant languages. Only in India can Pakistanis find a foreign audience that enjoys their music and cricket. The commonalities between India and Pakistan render Pakistan both Islamic and Indic. The country faces the same crosscutting cleavages that torment Turkey, but it has been able to build some bridges to India despite the conflict.

Identity factors have shown themselves to be more important than water as causes of conflict in the three basins examined. Despite aridity, droughts and degraded water quality, the states and peoples of all three basins fought mainly for their cultures and identities. They fought against the "other" to confirm their own identities. Water disputes are a function of identity-based conflict rather than a cause of conflict. For example, the Syro-Turkish water dispute is a product of conflict spawned by the Arab Revolt, the population policies of Jamal Pasha and the retaliation meted out on Turkish communities living behind the Hashemite Arab Army's front lines. Water and the Kurds were simply the latest fronts to fight on. Unfortunately, the World War I is alive in the

Middle East where there is also a widespread fear of minorities. Even Western-allied Turkey severely curtails personal freedoms including speech and religion. Its generals dominate the political process and justify their dominance by refusing to reconcile Turkey with its neighbors. By insisting that only Turks live in Turkey and depriving the country's Kurds of the right to speak Kurdish, Turkey's generals created the conditions that led to the PKK insurgency. Syria merely took advantage of the crisis, it did not create it. As a result, outcomes that result from pressuring Syria will not lead to peace in Turkey. The Turkish nationalist left, in alliance with the Army, seeks to use the waters of the Euphrates to settle the Kurds and integrate them into Turkish national life. While this is a more humane approach, it is also built on the premise that to be Kurdish is unacceptable in Turkey. To be Kurdish is to be a threat to the Kemalist Turkish state just as being Armenian or Arab was a threat to late Ottoman Turkey.

Being Kurdish is also a threat to the Iraqi state, but this not unique to Iraq's Kurds. Being Shiite, and thus a member of the country's majority community, is also a threat to the Iraqi state. Being Sunni is no protection either, because the Iraqi state is now the *Takriti* Sunni Arab state. Iraq is completely artificial state, kept alive through brutal repression and the desire of the United States and its Western allies to "*keep* Saddam in his box" to counter Iran. The United States "*keeps*" Saddam, because the collapse of Iraq will create an independent Kurdish state and increase the relative wealth and power of Iran and Syria. As a democracy, the United States' interests are best served when it can win over and bind over the populations of critical states like those of the Middle East. While this does not entail entering popularity contests, it does mean trying to avoid a negative image among the populations of these countries. Ultimately, the peoples of

these states will determine their borders and deal with problems like water allocation.

The people of Iran attempted democratization during the 1950s. Unfortunately, the West was not comfortable with a democratic nationalist Iran, and Mossadeq was replaced with the Shah in an Anglo-American financed *coup d'etat*. His autocracy eventually got the better of him, and his alliance with the West cost America Iran's friendship. Khomeini's Iran has been able to create a functioning elective government. By emphasizing Shiite Islam, Iran avoided the centrifugal forces that bedevil all but one of its neighbors. It has not developed its Tigris tributaries because it has alternative sources of water. But as its population grows, the high expenditures required to develop its mountainous river systems will seem smaller and smaller. Its decision not to develop its Tigris and Shatt-al-Arab tributaries has had a beneficial effect on the region, because the water helps Iraq compensate for its losses in the Euphrates. While perfectly capable of intimidating its smaller and weaker neighbors, Iran has not pursued a policy of constructing overt regional hegemony. Perhaps, it has the luxury of developing this hegemony by default due to its size, population and increasingly modern arms industry. It may not need to impose its order in the region, because many of its smaller neighbors are already gravitating toward it.

Afghanistan is the exception to the trend toward detente with Iran. The Taliban rulers of the "Islamic Emirate" are firmly aligned to Pakistan whose interest in Afghanistan has no connection with the Kabul river. Pakistan believes that it needs the "strategic depth" provided by Afghanistan to defend itself against the relatively overwhelming strength of India. Despite massive increases in population, neither country has challenged the allocative regime of the Indus Waters Agreement, so the Indus case

study proves water is not a cause of conflict between states. This hypothesis is also supported by analysis of conflicts in the Nile and the Tigris-Euphrates basins. The sources of conflicts in all three basins have been primarily issues of identity.

A NEW RESEARCH AGENDA

The importance of identity in the realm of conflict cannot be understated. As a consequence, examinations of international and trans-ethnic/religious reconciliation will become an increasingly important component of the study of the amelioration of water disputes. This does not necessarily entail complete peace and harmony, because hydrology requires only a floor level of cooperation. Dams and irrigation schemes function effectively and water resources are maximized when all parties involved are cooperating. Given the predicted increases in population, all riparian parties have an increased interest in settling their identity-based conflict. So, "hydraulic reconciliation" in this context can be operationalized to mean the construction of an allocative riparian regime.

Without implementing this partial or hydraulic reconciliation, cooperation over international rivers would be at a level lower than the minimum level required by hydrology. A good example of the minimum level of cooperation can be found in the hydraulic relationship between India and Pakistan. The Indus Waters Agreement is, of course, the very sort of allocative regime rejected by Egypt, Turkey and to a lesser extent the Sudan. Research needs to be conducted over the mechanics that induce a country like Egypt or Turkey to agree to water allocation regimes.

Another problem facing the field is the extent of basins and the contributions of

the various countries. There are no numbers on the Chinese contribution to the Indus River and the figures for the Euphrates are in dispute. More research needs to be conducted on the actual natural hydrology and water-use patterns of these various river systems. This is research that can help enrich the field by clarifying the contribution and consumption patterns of the various countries. Understanding the water contribution and water consumption of all riparians is critical for constructing allocation regimes.

Finally, the relationship between the state and hydrology needs to be weakened. To maximize the supply of water to people and to the natural environment, hydrologists need a measure of independence from the state. In Egypt, where hydrology is very advanced, hydrologists have been forced to defend positions they know are without merit. The creation of more powerful international hydrological institutions and the depoliticization of the discipline are an essential first step in accomplishing the sort of hydraulic reconciliation that exists today between India and Pakistan. Despite conflicts and wars, Indian and Pakistani hydrologists continue to work jointly on the Indus River in a professional manner. To that extend, it is perhaps safe to say that the Eisenhower administration probably achieved all that was possible in the Indus Basin.

SUMMATION

While the existence of allocative river water regimes does not end conflict between states and peoples in a river basin, it does allow for the development of water-optimizing riparian projects like dams and reservoirs in the proper location. To achieve peace between foes like India and Pakistan is perhaps beyond the skills of today's political scientists and diplomats. While reconciliation studies would help, ultimately it

will be up to the peoples of these river basins to make the decision to accept "the other."

Water disputes do not cause conflicts, because they are manifestations of conflicts that have roots in the formation of countries and the identity-based justifications given for their formation. International Relations theories attempt to ascribe "rational reasons" to conflict, so International Relations scholars are attracted to water disputes as a cause, but conflict is inherently irrational. "Irrational" factors such as faith, ideology and identity are not mere justifications for conflicts, they are real causes of conflict. People fight for their cherished myths, and not for water

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APPENDIX

GLOSSARY

Annual discharge: A river's annual output of water. River discharge varies from year to year, so the dissertation uses the commonly accepted annual average total discharge for each river.

Barrage: A low dam built to divert water rather than store it in a reservoir. Barrages are closely associated with headworks and canals. They can be modified to store water in small reservoirs.

Basin: The area drained by a river.

Bucketwheel: A canal digging machine designed in France, constructed in Germany, used in Pakistan and destroyed in the Sudan.

Canals: Ditches that carry water from reservoirs, lakes and rivers to farms, factories and cities.

Cataracts: Rapids in the Nile, impassable by water when the Nile is low. Bypassing the cataracts is crucial for any riparian invasion of the Sudan.

Catchment: The area within a basin that collects rain water.

Cubic Kilometer: The unit used to measure water in this dissertation. It is equal to 1 billion cubic meters of water.

Dam: A man-made or (rarely) a natural structure that slows the down and stops the flow of the river to store water for electricity production or water consumption.

Evaporation: Loss of water from a dam reservoir due to heat and the sun. Storing water in dammed mountain valleys reduces evaporation substantially.

GAP: The Southeastern Anatolia Project (in its Turkish acronym). A series of dams in Southeast Turkey.

Headworks: A structure that controls the flow of water into main canals.

Hurstian Plans: Dam construction plans based upon developing the water resources of the entire basin in a coordinated way. Words associated with Hurst include "Nile Control," "Century storage." The only implemented part of Hurst's plans is the Owens Falls dam in Uganda.

Hydrology: The science that studies the waters of the earth, including the fresh water cycle of evaporation, condensation, rain and the its flow of water to the sea. It is intimately linked with irrigation, dam construction and reclamation. The discipline was pioneered by the British and is now strong in Britain, Egypt, Turkey, India and the United States.

Irrigation: Supplying food and fiber crops with water through artificial means like canals, pumps, water screws (Archimedes screws). Irrigation is critical for the existence of cities and civilization.

Mahdi: Arabic for "rightly guided one." The title of the leader of a religious political movement that expelled Egypt from the Sudan in 1885, establishing a state that lasted 14 years.

Megawatt: One million watts. Equivalent of one million times 1/746 horsepower. It is used to measure the installed potential electricity production capability at dams.

Nilotic Peoples: Peoples who speak Nilotic languages such as Dinka, Shulluk, Nuer and Masai. These tribes are often dependent on cattle and grazing in grasslands.

Rain-fed agriculture: Farming that is dependent on rain for water. Common in India, Pakistan, Sudan and Syria. It is cheap to carry out but it has very low yields compared to irrigated farming.

Reservoir: A lake that forms behind the dam, used to store water.

Riparian and Co-Riparian: Associated closely with a river, sharing a river.

Seepage: The flow of water from a dam's reservoir to the water table underground.

The Sudd: A giant plant clogged swamp in South Central Sudan, crucial to sustain the grasslands used by the Nuer, the Dinka and the Shulluk. Egypt and the Sudan planned to drain part of the swamp to add water for Egypt through the Jonglei canal.

Wadi: A dry creek bed in the Nile or Tigris-Euphrates basins, given to flooding during the rainy season.

Water table: Underground water, usually fossil water. Sometimes it flows towards the sea much like a surface water after being fed by rainwater that seeps through the soil.

VITA

Jack V. Kalpakian
Graduate Programs in International Studies
621 Batten Arts and Letters Building
Old Dominion University
Norfolk, VA 23529-0093

Education:

- 1993- 2000 **Graduate Programs in International Studies (GPIS), Old Dominion University (ODU), Norfolk, Virginia. Ph.D.**
- 1995 **Summer Intensive Arabic Program, Center for Middle Eastern Studies, The University of Chicago, Chicago, Illinois.**
- 1992-1993 **Graduate Program in Government, CSU-Sacramento, Sacramento, California.**
- 1988-1992 **Bachelor of Science, Political Science, Santa Clara University, Santa Clara, California.**

Fields of Interest:

International Security, International Political Economy, Middle Eastern Politics and International River Systems.