

Outcomes of Aswan: Archaeology and the Geopolitics of Dams¹



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ABSTRACT:

Answering a call for help from the Governments of Arab Republic of Egypt and Democratic Republic of Sudan, the United Nations Educational, Scientific and Cultural Organization (UNESCO) lead the International Campaign to Save the Monuments of Nubia (1959–1968). Involving more than 100 countries, the campaign consisted in a wide range of archaeological missions along with financial aid aiming to preserve and safeguard the cultural heritage threatened by the construction of the Aswan High Dam, built on the Nile River throughout the 1960s. The location chosen for the hydropower plant's reservoir intersected the heartland of an extensive heritage belonging to both Nubian and Egyptian millenary civilizations implying the flood of several archeological sites and monuments of undeniable cultural and historical significance. This last chance to save the relics mobilized several scholars and countries that today exhibit their findings in their most prestigious museums. Entire monuments were dismantled and placed away from the inundations but still in the region, while others were moved to other countries as counterpart gifts on behalf of the Egyptian government. Under one specific angle, this article contests the well-established account that the international campaign was a success. The Nubian Campaign ends up normalizing a quite modern social phenomenon: to dam major rivers in name of national development. We then raise several aspects crossing the disciplines of archeology history and geopolitics as an exercise of counterweight to the official reports.

KEY WORDS:

Cultural heritage; archeology; hydropolitics; geopolitics.

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“For thousands of years the Great Pyramids of Egypt were foremost among the engineering marvels of the world. They ensured life after death to the Pharaohs. Tomorrow, the gigantic High Dam, more significant and seventeen times greater than the Pyramids, will provide a higher standard of living for all Egyptians”.

A much-quoted dictum of Gamal Abdel Nasser”⁴

“Il n’existe aucun document de culture qui ne soit en même temps un document de barbarie».

Walter Benjamin⁵

INTRODUCTION

The construction of the Aswan High Dam (1960 — 1971) caused an unprecedented worldwide cooperation aiming at saving the outstanding cultural heritage sites found in both the Egyptian and Nubian Nile river floodplains. On the 10th March of 2020, the 40th anniversary of the international campaign was celebrated in the National Museum of Egyptian Civilization in Cairo, as reported UNESCO’s newsletters. A year earlier, Egyptologists and other experts had gathered in the Italian city of Turin, in order to discuss the current threats posed by hydroelectric dam projects, this time in Sudan and Ethiopia. Experts then referred to Aswan as an unfinished work in relation to preserving the cultural heritage belonging to the Nubian people and Christian Greco, director of the Egyptian Museum of Turin, maintained that the time pressure had mainly determined how the monuments were handled, thus suggesting that the archaeological operations concerning the Aswan High Dam⁶ were, somehow, rushed.

As the outcome from this international campaign came the official report, which claimed that the success of the operation was an example of solidarity in an international effort to save the world’s heritage. Our goal here is not to deny the UNESCO’s campaign achievements, but to question the extension of such an effort in terms of its legacy, *vis-à-vis* current experiences involving dams, environmental assessment surveys and Preventive Archeology practices. Indeed, the Nubian campaign was quite an atypical and unique example of cooperation, no longer replicated around the world in terms of scale and scope. Although, our analysis suggests that geopolitical aspects came into play about the dam building, presenting a number of imperatives which remain excluded from an extensive discussion about the campaign’s legacy, either amongst experts, scholars or with the wider society.

4 J. JOESTEN, *Nasser’s Daring Dream: The Aswan High Dam*, in: *The World Today*, Vol. 16, No. 2, 1960, p. 59

5 A. BIRNBAUM, *Matérialisme, matériau, division du présent*, in: SCÉRÉN — CNDP, March 2011, <http://www.cndp.fr/magphilo/index.php?id=112>.

6 B. COOLLEN, *Effort to save Egypt’s Abu Simbel temples in 1960s recalled*, in: AP News, 7 February 2019, <https://apnews.com/article/egyptian-museum-dams-turin-cultures-italy-Oce9aa37989848e59e019580acf2707e>.

COLD WAR, HERITAGE & HYDROPOLITICS



This year, Egypt celebrates its 50 year's anniversary since the inauguration of the Aswan High Dam. The dam continues to be criticized for its human, environmental and heritage damages while its source of energy is no longer as important, as it is nowadays, a source of water. Egypt is now threatened by an upstream underway dam, the Grand Ethiopian Renaissance Dam (GERD) which is in construction in the Blue Nile since 2010. As the two mega-dams will coexist on the same river, the riparian countries in cooperation with Sudan, have been engaging in negotiations for quite a long time. However: *"There is not yet agreement on how these dams will operate to manage scarce water resources" (...)* *"no specific agreement yet on water sharing or reservoir operations"*. Hence, a conciliation over the water use across several states has historically proven to be much too sensitive to be handled in advance.

On one hand, the "hurried" treatment of a cultural heritage of world's significance is due to one need: the dam building, the energy, the regulation of the annual floods and the water retain. The consequence was a long process trying to erase the irreversible impacts and damages caused to the Nubian people, added to several environmental negative impacts and bad management, and the loss of heritage relics. Even so, the Nubian campaign emerges as an unprecedented success. On the other hand, a circumstantial and "last-minute" bias was given to policies over water (hydropolitics) which governs bilateral and multilateral agreements concerning rivers shared by several states.

Yet, in the case of Egypt, we can look up at a newly formed state, recently freed from centuries of colonial rule and military occupation. While Egypt has risen from one imperial bond built up in the end of the 19th century, it might have automatically shifted to another realm of the geopolitical framework after the second half of the 20th century. Assessing intersections of technological and environmental history, Sara B. Pritchard outlined the term of hydroimperialism *"(...) to convey the ways that water, hydraulic knowledge, and water management practices both revealed and reproduced unequal power relations predicated upon an expansionist mentalité, whether political or economical in orientation"*⁷.

Featuring public investments, international loans and technical assistance from the beginning of the 20th century, large dams and irrigation networks massively appear across the world, as those structures become assets for a country's development. Such technical landscapes are central to understanding unequal power relationships, as they reveal particularities in target states, within the Cold War background, such as the independent Egypt.

As it is well known, the Cold War conflict gradually incorporated not only the neighbouring states of the world's biggest powers but likewise, the Third world, where struggles were and still are centered around more basic steps towards devel-

7 K. G. WHEELER — M. JEULAND, — J. W. HALL, et al., *Understanding and managing new risks on the Nile with the Grand Ethiopian Renaissance Dam*, in: *Nat Commun*, Vol. 11, No. 5222, 2020, pp. 1-2.

8 S. B. PRITCHARD, *From Hydroimperialism to Hydrocapitalism: 'French' Hydraulics in France, North Africa, and Beyond*, in: *Social Studies of Science*, Vol. 42, No. 4, 2012, p. 592.



opment (social welfare, industrializing policies etc.). The Third world or the international system's periphery is structurally defined by the lack of funding and technology, as well as having large parts of its population living under minimum conditions⁹. A certain role gradually shaped third world countries as raw materials and agricultural commodities suppliers, providing for the central and already industrialized economies, and for that, energy is mandatory.

Efforts to overcome this secular logic rises, for example, with national programs to foster the inner industrialization being again essential the expansion of energy sources. Third world countries relied mainly upon foreign financing and aid for development projects and in the Cold War agenda; this effort was mainly committed with either the Soviets or the Americans while they territorially stretched their influence. Yet, financial and technical assistance coming from the world leaders is not justified by philanthropy, vast interests in territories of the global south, Eastern Asia and the Middle East justifies the assistance and financial help coming from the bigger economies.

Today this bipolarity cannot be addressed in the same way, as we see a consolidation of a fully globalized economy in which some places operate as parts of global networks. The advancement of the *technological frontier* has largely replaced the *territorial frontier* as a mechanism to increase profits¹⁰. Thus, the organization of the territory is no less informational or ceases to be assessed in terms of financial risks. Modernity designates, among other things, the substitution of the means of production, the expansion of energy sources, the diffusing of ideologies like the westernisation, policymaking and interventionism, technopolitics, hydropolitics¹¹, ecocides and so on. It seems that such analytical instances, as hydropolitics, still need to be studied in face of a mismatch between central economies and the system periphery.

The mega-dam-industry was characterized as a world phenomenon after the Second World War, its expansion pretty much continuing from the 2000s up until today. It does so, to the detriment of heritage sites' preservation, and mostly to the detriment of societal or environmental risks and liabilities already well known today. We question the role of UNESCO, which is contradictory, as it is orchestrating the archaeological rescue campaign, while legitimizing water and energy related businesses. This is an official portrait of the time, in which nature's destruction and the forced displacement and violation of native people's rights can go almost unnoticed.

9 The concept of the International Division of Labor expresses the degree of geographical asymmetry (on a global scale) in the use and income of labor in different stages of the evolution of the world economy. For a review of the concept in other countries, see M. POCHMAN, *O emprego na globalização. A nova divisão internacional do trabalho e os caminhos que o Brasil escolheu*, São Paulo 2007. About the New International Division of Labor see F. FRÖBEL — J. HEINRICHS — O. KREYE, *The New International Division of Labour*, Cambridge 2009.

10 A. M. C. MORAES, *Meio Ambiente e Ciências Humanas*, São Paulo 1997, p. 18.

11 On hydropolitics concept see the survey by Paul Howell over the work of Robert O. Collins (P. HOWELL, *Nile Waters — The Waters of the Nile: Hydropolitics and the Jonglei Canal, 1900–1988*. By Robert O. Collins. Oxford: The Clarendon Press, 1990. Pp. Xxii 441, in: *Journal of African History*, Vol. 33, No. 1, 1992).



At the announcement of Egypt's president Gamal Abdel Nasser, that the Aswan High Dam was going to be built in 1955, the archaeological remains of pharaonic Egypt and Nubian civilizations were immediately considered as endangered. Around 5.000 square kilometres of the Nubia region was affected by the flooding of the dam.

The most iconic cases regarding this heritage were the temples of Abu Simbel and Philae, but countless other monuments, historic, artistic registers and sites from pre-history to medieval times were endangered¹². Colossal human and financial resources were deployed in the region by several nations. Their preservation, or at least their study (and later the possibility of transferring entire monuments to safe spots) were achievements acknowledged to the international campaign led by UNESCO, despite the instability posed by the Cold War polarity. The worldwide answer to Egypt's, Sudan's and UNESCO's call, for both economic and technical challenges, was indeed positive. Although it turned out that big dams particularly impact large areas, generating a potential threat and disruption to the soil, hydrography, ecosystems, populations and archaeological heritage. The Aswan High Dam is still nowadays one of many other major dam projects built across the world during that period. However by looking at contemporary other cases of dams, as well as after Aswan, it appears that very few have benefited from the same international attention. We then wonder about the diverging treatments of the heritage's issue between the Aswan dam and other cases.

AFTER ALEXANDRIA FIRE, THE WATERS OF ASWAN?

Egyptian historiography reflects the relationship between memory and forgetfulness. It was Herodotus, acclaimed as the "Father of History"¹³, who first reported the Egyptian civilization. He did so on behalf of the Ptolemaic kings, for whom a general history of the Egyptian civilization was summarized. Parts of that work were lost in the Alexandria library fire. The rescued documents and other compilations are still the only few sources that historians work with. During the Christian era, writing according to Pharaonic forms was prohibited and thus extincted; this language would survive only through speech. First objects of exhibition, then of scientific investigations, Egyptian "antiquities" arose in Europe in the Enlightenment collections of artifacts. European scholars and aristocracy, imported sarcophagi, statuettes and many other relics from Egypt.

In 1822, Jean-François Champollion deciphered the Egyptian hieroglyphs, thus making possible to access existing sources and original documents as well as deci-

12 C. MAUREL, *Le sauvetage des monuments de Nubie par l'Unesco (1955-1968)*, in: *Egypte/ Monde arabe*, Vol. 22, 2013, p. 3.

13 "(...) there is indeed a consensus on the author's reputation as "Father of History". It is based on understanding his text as an integrated unit, articulating the arguments of the epic tales with the investigation, characteristic of the historical genre. (C. CONDILO, *Heródoto as tiranias e o pensamento político nas Histórias*. São Paulo 2008. Dissertação de Mestrado em História Social no Departamento de História da Faculdade de Filosofia, Letras e Ciências Humanas da Universidade de São Paulo. São Paulo 2008, p. 8).



phering new archaeological discoveries¹⁴. When Champollion achieved the first complete translation of the “Rosetta” stone, Egyptology already stood as a discipline. Europe led the institutionalization of the discipline until the 1950s.

European interests coincided, however, with the responses for preserving Egypt’s Pharaonic antiquities on behalf of the Egyptian rulers. In 1835, Muhammad Ali Pasha banned the exportation of Egyptian antiquities outside their territory. Furthermore, he decided that artifacts should be gathered in the city of Cairo, thus constituting the first Egyptian antiquities collection, although stored in a very limited space. The Citadel Museum came as a solution for this problem of space. Such a collection, however, ended up being offered to the Austrian Duke Maximilian and later became “the mainstay of the Egyptian collection in Vienna’s Kunsthistorisches Museum”¹⁵.

Meanwhile, a French archaeologist Auguste Mariette, who was in charge of several relics management, helped to maintain the relics in Egyptian lands (by means of legislation) and carried out the creation of the Museum in Bulaq, on the Nile’s shores, in order to host all the pieces from the undergoing numerous archaeological excavations. Paradoxically, this brought back the natural power of the Nile: “in 1878, the museum and its contents suffered immense damage as consequence of a disastrous Nile flood”¹⁶. The new discoveries were then transferred to the Giza Museum, to be finally placed in the Tahrir Museum, or the New Museum of Egyptian Antiquities in Cairo. Despite the 1835 ordinance banning the export of antiquities, “free gifts” were still under evaluation. Thus, other nations archaeological teams passed to extract objects from Egyptian lands to be placed in numerous European museums.

The UNESCO periodical issue, *The Heritage Landscape in Egypt* (2005), compiles the analyses of Egyptian specialists in history and museology. They notice a claim for their own knowledge production, as opposed to a tradition of knowledge produced during the colonial past of Egypt. In 1922, the independent kingdom of Egypt was proclaimed, marking a political turn that shook the position of Europe on the stage of Egyptology, as the assimilation of the ancient past into national identity, initiated during the 19th century, was then growing¹⁷. British archaeological teams left Egypt in 1925 after the Egyptian government refused to entrust them with the management of antiquities. Gradually, the archaeological teams counted more and more Egyptians. From 1953 up until today, Egyptians exclusively have run the Antiquities Service of Egypt, although European countries still maintain their research.

Even though important documents were lost in the fire of Alexandria, the relics were flooded, and later objects were transferred to museums around the world, nothing has seemed more threatening to heritage’s preservation than the flooding

14 C. MOKTAR (ed.), *UNESCO General History of Africa, vol. II Ancient Civilisations of Africa*, Paris, London, Berkley 1981, p. 6.

15 W. EL-SADDIK, “The Egyptian Museum” *Museum International*, in: *Quarterly revue*, No. 225–226, 2005, p. 32.

16 *Ibidem*, p. 32.

17 E. GADY, *L’archéologie de l’Égypte antique pendant la période coloniale de l’occupation britannique à la découverte du tombeau de Toutankhamon’*, in: *Les Nouvelles de l’archéologie*, Vol. 126, 2011, p. 48.

of several archaeological sites and monuments during the construction of the Lake Nasser and the Aswan High Dam.



THE DAM THAT SPARKED THE WORLD HERITAGE CONVENTION

It was an Egyptian government initiative to host archaeological surveys on the sites threatened by submersion, and the government asked for UNESCO's help. UNESCO responded by inviting volunteer countries to organize archaeological missions in Nubia¹⁸. Following this request, twenty-one countries sent archaeological missions to Egypt. The United States, Italy, Spain and France shared half of the 53 sectors covered by the investigations located on the banks of the future Nasser Lake. The entire area of the future reservoir was at some point under archeological investigation, at least in the Nile major floodplain zone.

At the beginning of the operations, archaeologists fulfilled a role similar to what is today called preventive archeology. Their aim was to inventory and carry out registers and records of the archaeological findings before their irreversible destruction. Despite the importance of those works, the common goals of the missions and the pressure due to the historical period, disagreements occurred between the nations involved¹⁹. All the excavations were conducted in terms of "concessions".

Given the value that several temples presented, the idea of safeguarding entire structures was considered, and in this case, their transfer to safer areas. The rescue of Nubian monuments happened to be a new initiative, not initially foreseen in the program entrusted by the Egyptian government to UNESCO. Despite the urgency represented by the dam's construction and the flooding of the future Lake Nasser, the implementation of the monuments rescue plans took long years. Public and private funding faced several difficulties as the administrative burden slowed down the whole process. However, the campaign resulted in the total or partial displacement of 22 cultural heritage sites before the creation of Lake Nasser in 1967. Many countries claimed relics to garnish their museum's collections. As the sale of relics was prohibited, requests for "compensation" given the voluntary initiatives of excavation were stated. Many relics reached the Louvre, the British Museum, etc. A full inventory of all these exported pieces would require an extensive investigation, beyond the scope of this article. At the end of operations, four temples were moved out of Egyptian lands (FIG 5): Dandour, Debod, Ellesya and Taffawere, allocated respectively to the United States, Spain, Italia and Netherlands, and part of a temple, the Kalabsha portico, stands today in the Neues Museum in Berlin. Abu Simbel and Philae remain in the riparian zone of the lake, although safe from the lake's waters.

The need to formally protect the landscape by identifying it as a part of the universal heritage, originates with the Convention Concerning the Protection of the World Cultural and Natural Heritage, adopted by the general conference of UNESCO held in Paris in 1972. The committee had looked closely to the challenges faced in the Aswan High Dam case; the flooding of the Nubian monuments of Abu Simbel and

18 MAUREL, *Le sauvetage des monuments de Nubie par l'Unesco*, p. 4.

19 Ibidem, p. 3.



Philae spread awareness around the world. Due to a “dam paradigm”, preservation policies and protection practices towards “cultural assets shared with nations started to take shape”²⁰. Undeniably: “The principles formulated during the international campaign launched by UNESCO were codified in the Convention of the Protections of the World Cultural and Natural Heritage”²¹.

The Aswan High Dam sparked the creation of the Convention Concerning the Protection of the World Cultural and Natural Heritage. Moreover, it was the first time that a worldwide international instance formally recognized the importance of both natural and cultural heritage. Furthermore, the convention identified this heritage’s value, not only within a specific geographical or sociological territory but instead underlying the importance of preserving relics as part of the World Heritage of Mankind. In addition to defining Cultural and Natural Heritage, the resolution defined key competences for national and international protection, established an Intergovernmental Committee compromised to the Outstanding Universal Value called the “World Heritage Committee”, and, created the World Heritage Fund. The world heritage began to be discussed at the international arenas and to a larger degree, based on the challenges created by this kind of engineering works. The first page of the text quotes: “the social and economic changes” as the causes which “threatened with destruction” the cultural and natural heritage. What seems as a very subtle approach rather proved itself to be a clear positioning of UNESCO on the critical aspects of such undertakes. In other words, the institution was not willing to go further for instance, in questioning the extent of the role of such undertakes in threatening the world heritage.

The convention document is a milestone to the academic and scientific community in global perspective. Over history, such an approach has always either been restricted to the fields of social sciences, more like a philosophical matter, or, on the other hand, in the late 70s identified as an ecological concern. Nowadays, the international community comes across a completely new professional field. It is noteworthy that providential procedures in regards to Archeology were the subject of international agreements years after the experience in Aswan. The Charter for the protection and management of the archaeological heritage established by the International Committee for the Management of Archaeological Heritage (ICAHM) was approved in Lausanne in 1990, and the European Convention on the Protection of the Archaeological Heritage was signed in Valetta. Moreover, the guidelines of the Venice Charter (1964) were applied *in locus*, during the Nubian Campaign²².

20 E. TRUSIANI — E. BISCOTTO — S. B. D’ASTOLI, *Landscapes. Between conservation and transformation* Gamgemi Editore, Roma, 2013, p. 27. As in: “The need to create a legal instrument to protect the excellent works of different people takes origin first in a debating dimension within the Society of Nations before the WWII, but the commitment for the creation of an international treaty for the protection of cultural heritage become more significant after the construction of Aswan dam in Egypt in 1959” (Ibidem, p. 27).

21 C. PALLINI — A. SCACCABAROZZI, *Imagination, design, technique: Three European projects for Abu Simbel*, Pallini&ScaccabaroZZi 2012, p. 195.

22 Hudges (1983) as cited in Cataia (M. CATAIA, *Macrossistema elétrico brasileiro: integração nacional e centralização do poder*, in: H. CAPEL — M. ZAAR (Coords. y Eds.), *La electricidad y la transformación de la vida urbana y social*, Évora 2019, p. 582).

GEOPOLITICAL IMPLICATIONS × UNESCO'S CONCERNS

The History of agriculture and water management seem inseparable. However, the classical historiography first accredited drainage and irrigation systems as appearing within Classical Greece and Imperial Rome; archaeological surveys along the Nile banks had revealed that around 5000 years BC, irrigated agriculture was already in practice. Hence a strong association between the beginning of agriculture and the establishment of irrigation and drainage systems²³. Due to the natural falls at the Aswan site, the flooding occurred every year as a normal event. Sometimes less significantly, sometimes more, which implied less fertile areas and, consequently, poor crops production; or in the case of large amount of water, damages to buildings and roads in the vicinity. From this point of view, the English undertook the first dam in the site of Aswan (1889–1902), which was years later reinforced in height on two occasions: 1907–1912 and 1929–1933²⁴. Hydraulic technologies as means of modernization have taken shape since the river flow can be regulated through the dam, an intervention which allowed to store water for a more industrial crop production.

Environmental history and geopolitics encounter revenues out of few contemporary scholars in considering such forms of *knowledge-making apparatuses*²⁵. Christopher Sneddon when historicizing the geopolitics of large dams as a mean to establish American companies and ideas around the world, uses the term “technopolitics” after Gabrielle Hecht, once it “*captures the hybrid forms of power embedded in technological artifacts, systems, and practices*”²⁶. Hence technopolitics as hybrids of politics and technology “*(...) take place in narratives of national and social identity with concrete policy positions and material outcomes*”²⁷. This concept efficiently studies the networks of technology and politics co-production for Aswan, as it involves nationalist demands for inner industrialization policy, energy planning and its access to democratization,

23 A. N. ANGELAKIS et al., *Irrigation of World Agricultural Lands: Evolution through the Millennia*, in: Water, Vol. 12, No. 5, 2020, p. 4.

24 S. MAHMOUD, *The development of archaeological and historical museums in Egypt during the nineteenth and twentieth centuries: imperialism, nationalism, Unesco patronage, and egyptian museology today*. Dissertation In History, Faculty of Texas Tech University, 2012, 150.

25 In the book *Imperial Eyes: Travel Writing and Transculturation* (1996) Mary Louise Pratt deals with a European project described as a “planetary consciousness”, since imperial states planned to shape the world after its own narratives of circumnavigation and accomplishment of mapmaking. (M. L. PRATT, *Imperial Eyes: Travel Writing and Transculturation*, Routledge 2003, pp. 29–30).

26 From the intersection of the disciplines of anthropology and history science and technology, as well diplomacy history; Gabrielle’s essay called *Entangled Geographies Empire and Technopolitics in the Global Cold War* gazes the struggles related to technology as part of global political arenas that took place worldwide after the end of WWII. Working with the “entangled in technologies” she offers an unusual view for the contemporary historiography about imperialism and post-colonialism constructs, questioning the legacies and the new globalized world (C. SNEDDON, *Concrete revolution: large dams, Cold War geopolitics, and the US Bureau of Reclamation*, Chicago 2015, p. 14).

27 C. KURBAN et al., *What is Technopolitics? A Conceptual Schema for Understanding Politics in the Digital age*, in: IDP: Revista D’Internet, Dret i Política, Vol. 24, No. 24, p. 502.





along with industrial crops expansion. As for enhancing the infrastructure, a technical object such as dams effectively can become means for social control. While studying the electrical system development in the United States, Thomas Parker Hughes (1983) offers a triple level analysis: “(i) major engineering works, such as a hydroelectric dam, (ii) the distribution of electricity flows through electrical networks, and (iii) companies business management to link supply and demand”²⁸. In such a technical macrosystem, each one of the systems’ agents operates according to their inner rationality, but likewise they interact with each other throughout a physical network (from generation to consumption of electricity). However, a network is not perceived as neutral, once it “(...) assumes practical effects engendering specific power relations, which are usually hidden”²⁹. We agree that directives which originated externally from the local reality may overlap, whereas the exercise of power is present in the territory endowed with information control, as well as a technical, political and economic control³⁰.

Beyond the *networks of power*, technopolitics reveal the chain of actors in the installation and operation of a hydroelectric power plant. They cover the site selection and the feasibility surveys, the design and dimensioning of the hydroelectric power plant. However, it can be argued that the assessment of the risks involved, in the case of the High Dam, were nonexistent (concerning the social and environment impacts). Indeed, the financing and execution plans fostered (through many critical ways) a diverse range of sociological transformations.

Electrification achievements and national development appear to be in direct association. Contradictorily, before the canals and dams, natural floods sufficed to fertilize the agricultural floodplain stretches with silt and nutrients. Although technical interventions conditioned the soil for the use of artificial nutrients (boosted by the fertilizer industry). Chemical fertilizers produced by American or European companies made the upper Nile region deeply dependent on foreign technical assistance. Agricultural development and technical progress bond with hydraulic works were capable to rearrange entire communities and ecosystems by unfolding economic justifications, not only for electricity providing to a wider range of towns and villages, but the ventures sparked by the dam also needed to turn agriculture in newly available lands into profit. The definition of what to cultivate happened to be a struggle too: “*The High Dam ended the annual flooding of the Nile and enabled the authorities to extend the cultivation of sugarcane, which displaced the growing of wheat*”³¹.

Throughout the 1940s, one of the outcomes of the hydraulic works (such as the raise of the Aswan Dam in 1933) was the spread of *Anopheles Gambiae* mosquitoes (one of the kinds responsible for transmitting Malaria) who had a great influence on the social order subsequent to the modern Egypt foundation. The epidemic was especially malicious during the World War Two and the following years. The disease “(...) took advantage of irrigation schemes, population movements, and changes in agriculture to become the world’s most deadly infectious disease”³². In 1942 “(...) the British acknowledged

28 M. CATAIA, *Macrossistema elétrico brasileiro*, p. 581.

29 Ibidem, pp. 581–582.

30 Ibidem, p. 582.

31 T. MITCHELL, *Rule of Experts: Egypt, Techno-politics, Modernity*, Berkeley 2002, p. 195.

32 Ibidem, p. 50.

that the surest way to restore the health of the Egyptian population would be to destroy the dams and return to basin irrigation³³". Furthermore, "With the mosquito's help, questions of hygiene, disease, housing, and ignorance emerged as the principal way of addressing the situation of rural Egypt"³⁴.

Within the framework of Health Geography, social and environmental aspects both determine the spatial distribution of diseases. Max Sorre's concept of "pathogenic complex" (1951) or Eugeny Pavlovsky's concept of "natural focus" of diseases (1966) explains that diseases are related to their places of occurrence. Thus came the beginning of studies in Disease Ecology³⁵. Hence "Environmental modification such as dam construction has long been recognized to enhance malaria transmission"³⁶. Several scholarships are currently dealing with the dissemination of the Malaria disease based on the expansion of dams, mining sites, railways constructions, or urbanization in remote areas. Benjamin Brendel came along, deepening the investigations regarding the efforts for Schistosomiasis control over the 1960s in Egypt, which in this case deeply involved the construction of the hydroelectric power plant. He identified three main aspects at its core: a modern discourse advocating for dam building, global north development aid and design of health care programs³⁷.

The sociological dynamics in modern Egypt entangled with foreign influence for an opening to modernity and technopolitics involving the hydraulic works, are arguable. In his book *Rule of Experts Egypt, Techno-Politics, Modernity*, Timothy Mitchell describes the foreign influence in Egypt for building the health national program as a response to the spread of diseases, as well as shaping rural planning and technical development projects. He scrutinized, for instance, the introduction of housing programs in rural areas along the Nile Valley. The Aswan High Dam changed as well the ancient ways in which the Egyptians built their houses based on traditional knowledge, using the river shore as a raw material for shaping mud bricks: "Villagers no longer had the long weeks of the Nile flood, which in the past provided time for the laborious work of brick making and communal house building"³⁸. According to him, this ancient knowledge was stopped by the introduction of baked red bricks and concrete for housing purposes, which later did not prove to be more adequate for that environment. Besides, in the years following the High Dam inauguration, registers have shown that the dam blocked almost all the sediments that had remained before in the flooded areas, used to produce bricks. Despite an already historically unbalanced situation due to the interventions on the river and its traditional populations, and the negative impacts of external demands, as op-

33 T. MITCHELL, *Rule of Experts*, p. 23.

34 Ibidem, p. 50.

35 R. D. MARQUES, *A geografia da malária na faixa de fronteira brasileira — geography of malaria in the brazilian boundary zone*, in: Anais do I Congresso Brasileiro de Geografia Política, Geopolítica e Gestão do Território, 2014, p. 979.

36 S. KIBRET et al., *Malaria impact of large dams in sub-Saharan Africa: maps, estimates and predictions*, in: Malar, Vol. 14, No. 339, 2015, p. 5.

37 M. BRENDEL, *Moderne — Macht — Morbid*, in: NTM Zeitschrift für Geschichte der Wissenschaften, Technik und Medizin, 2017, p. 349.

38 T. MITCHELL, *Rule of Experts*, p. 195.





posed to local needs, the decision to build the hydroelectric plant was more than imperative.

The international political scene was considerably tensed after World War Two. The Aswan High Dam stemmed from a nationalist military revolution which definitively put an end to British colonialism in Egypt, all the more so after the Suez crisis (1956), whereas people's demoralization due to the war over Suez not only by the English but also French neo-colonialist interests in the country, became a reason for a worldwide rejection. Moreover, even when the free officers seized power, the American plan for the region was to keep it away from Soviet influence, a plan already undergoing throughout the 1950s. All of these factors were indeed deeply intertwined. It is worth mentioning that likewise in the undergoing Arab-Israeli conflict in Palestine, Israel joined the European forces in the Suez conflict.

The Egyptian Revolution or the Free Officers Movement dated back to 1952 and during the same year, preparatory works began about four miles upstream the ancient Aswan dam site, although the signal to go full speed over the project only occurred in 1954, under Nasser's regime. At this time, Europeans were the ones working on viability studies of the hydroelectric site, such as German Company Johann Keller and the French Sogoya.³⁹ Furthermore: (...) *the experts of the TCA furnished their assistance and experience to the Egyptian government in studying the feasibility of building the Aswan High Dam.*⁴⁰ However, the *"Soviet commission of technical experts had taken over from the Western experts at the end of 1958."*⁴¹ An unforeseeable shift occurred in a short span of about five years: a series of events which twisted the American influence over Aswan and Egypt, tending towards the Soviet Union influence.

Political neutrality, economic independence, and the Aswan High Dam were claims of a new era in Egypt under Nasser's rule. This reforms would imply the modernization of the country towards an autonomous policy for economic development, undertaking the hydropower as a symbol for identifying the Egyptian Arabic-Islamic modernization as both independent and revolutionary. However, financial and technical support were necessary for the venture, and in this regard, Egypt actually played a dual role between the two blocs of the Cold War in negotiating the values and terms for the loan for the dam project. As a bitter outlook, it might be claimed that overall, the British colonial presence was "replaced" by an alignment with the socialist system, especially obvious after the nationalization of the Suez Canal in 1956.⁴² The Egyptian realignment can be explained by several factors beyond the path taken for implementing the dam. Meanwhile, the creation of the United Arab Republic (1958) was an example of an effort towards the unification of Arab culture in one single

³⁹ J. JOESTEN, *Nasser's Daring Dream*, p.58.

⁴⁰ M. A. SAYED-AHMED, *US-Egyptain relations from the 1952 Revolution to the Suez Crisis of 1956*, PhD in Politics, in the Department of Economic and Political Studies, School of Oriental and African Studies, University of London 1987, p. 133

⁴¹ J. JOESTEN, *Nasser's Daring Dream*, p.58. According to him, the Point Four programme agreement between Egypt and United States, was technical assistance that made available up to \$10 million for reclamation of 80.000 acres of land in Egypt by the year of 1953.

⁴² L. S. CHIELE- B. H. DALCIN, *A Política Soviética para o Egito e seus desdobramentos sobre a Primeira Crise do Suez*, in: *Revista Perspectiva*, Vol. 10, No. 19, 2017, p. 104.

territory and its possible expansion, as independent from the powers of Moscow or Washington as possible.

A reviewing treaties and agreements over the Nile must consider that Sudan has remained under British control until 1956, therefor even though Egypt got rid of English influence, the following years were critical politically, due to the use of water adhering to the Nile Basin countries, especially with Sudan. Negotiations for financing the project then involved more and more stakeholders. According to Kanchana Wangkeo (2003), the Nile Water Agreement between Sudan and Egypt signed in 1929 is one explanation for what initially prevented Nasser's plan to obtain aid from the World Bank. The bank was somehow safeguarding interests on behalf of Sudan, and a review on the agreement first intended to ensure a balance for the use of water between the neighboring states. Clearly, hydropolitics can explain the role of regional agreements and treaties in Africa.⁴³

With the regime change in Sudan, approximations were made with Cairo, concluding to an agreement on water use in 1959. This relationship then escalated to the 1960 "Permanent Joint Technical Committee to facilitate co-operation on agreed projects."⁴⁴ The perspective saw the money for the Dam building as coming from the IBRD, as well as from the United States and Great Britain. Although the attacks of Israel in Gaza were a plot twist. they gave Americans and their allies enough reason to refuse to sell weapons to Egypt. In these circumstances, the arms deal signed between Egypt and Czechoslovakia (and later with the Soviet Union) actually revealed a turning point in Egypt's positioning. Afterwards, the West formally refused to provide financial aid for the dam's construction and in retaliation, Nasser defied them with the nationalization of the Suez Canal Company⁴⁵, in reprisal for the American aid withdrawal⁴⁶. One possible explanation was that by nationalizing the Canal, Nasser believed that Egypt could finance the dam's building with the Suez operations.

As a leader, President Nasser has continuously been read as identifying with the masses. Indeed, his personality represented the Arab identity, and his leadership was notorious, especially considering the tensions at the time: "(...) *the British evacuation, the opposition to the Baghdad Pact, the Czech arms deal, the nationalization of the Suez*

43 Under Eisenhower's administration, the issue of sharing international waters in relation to the Nile River basin was central for Americans foreign policy, intended to collect knowledge about the region and thus exercise political influence in this sense, empirical information about the stream flow was a bargain factor. As a river water control means the possibility of affecting its volume downstream. Sneddon demonstrates as diplomats in Africa openly reported how it was beneficial for Americans to fuel dissatisfaction among Ethiopian authorities (where American Bureau conducted active land and water surveys), since the neighboring country was not consult on the construction of the Aswan, nonetheless, sharing of same watershed, Ethiopia would be affected by the dam.

44 Okidi (1996) as cited in Swain (A. SWAIN, *Challenges for water sharing in the Nile basin: changing geo-politics and changing climate*, in: *Hydrological Sciences Journal*, Vol. 56, No. 4, 2011, p. 690).

45 K. WANGKEO, *Monumental Challenges: The Lawfulness of Destroying Cultural Heritage During Peacetime*, in: *Yale Journal of International Law*, Vol. 28, No. 1, 2003, p. 204.

46 L. S. CHIELE — B. H. DALCIN, *A Política Soviética para o Egito e seus desdobramentos sobre a Primeira Crise do Suez*, p. 105.



*Canal Company, the seizure of foreign properties, the rejection of the Eisenhower Doctrine, the establishment of the UAR, and the adoption of socialist policies*⁴⁷. Such changes contributed to the rise of a new kind of idol in modern Egypt, while keeping at the same time the West on alert.

The international cooperation to safeguard the world heritage, in the case of Aswan, actually circumvented divergent positions in the geopolitical context, in order to be successful. An executive member of UNESCO, Brazilian Paulo Carneiro, explained in an interview from 1979 that the Egyptian minister of culture contacted UNESCO in 1949 (just four years after the institution creation) and before the revolution in Egypt, asking for UNESCO's attention and mentioning the possibility of an international cooperation for rescuing the Nubian monuments. Carneiro visited the areas of the future lake, along with archeologists and ethnographers from Egypt. He personally said to Nasser that he would launch an international campaign to gather money for the rescue of the Nubian items. He also said that at the following UNESCO's conferences (1950, 1951, 1952), the plans for funding the campaign were going to be the main topic. He stated that a significant part of the donations was coming from Americans. On one occasion, he traveled to Washington to ensure that the contribution promised by the American government would be fully provided, especially since on many occasions, the funding issue had been critical. He was however unlucky, since the American embassy in Cairo had been attacked on that same day by civilians, and thus went back to Paris without meeting President Kennedy, but accepted to have a serious conversation with Nasser.

It is now widely acknowledged that thanks to UNESCO, several members of the organization participated in the Nubian campaign. However, *“that international expeditions demanded 50% of the finds for museums in their respective countries. This practice not only robbed Egypt and the Sudan of valuable heritage items, including whole Nubian temples, but also led to the partition of collections, undermining the integrity of assemblages now scattered in museums all over the world*⁴⁸”. Indeed, the heritage management embodies a somewhat atypical collaborative effort between the West and East, and between the North and South hemispheres, which did not happen so easily. A few issues were appointed in the international campaign legacies: from irreparable loss to examples of wrong handling, such as the neglect and unfair practices regarding the management of the heritage property.

DAMS AND THE POLITICS OF A TREASURE HUNT? FINAL REMARKS

The appearance of large dams and hydropower plant's technical landscapes boosted two simultaneous and intertwined processes : the denaturalization of the natural (original) spaces and the constitution of living and production environments due to the acceleration of new technologies. This process has gained strength as it reached several instances of the modern way of production (communications expansion, tourism, etc.). It defined a competition between the economic and the socio-

⁴⁷ M. BRENDEL, *Moderne — Macht — Morbid*, p. 353.

⁴⁸ F. HASSAN, *The Aswan High Dam and the International Rescue Nubia Campaign Article*, in: *African Archaeological Review*, Vol. 24, No. 3, 2007, p. 80.



environmental planning as well, which can be observed throughout the 20th century as exponentially unequal. A strong contrast can always be noticed between “(...) the capacity for mobilizing material and technical resources by private or state capitals” This can count with the advantage of “(...) previously built space suitable for its rapid generalization.” in relation to “relative fragility of the means turned available to environmental planning and protection.” This was due to the lack of resources given to nature conservation, social impacts and heritage protection. We can point out that “(...) disproportion between the very often artisanal methods of environment protection, in the face of industrial methods of planning and of putting into practice the continuous transformation of that same environment”⁴⁹. Also, the lack of political will plays a role, or the very omission of the political class with these matters. The environmental movement and the concern with humans’ rights were starting to become a worldwide concern throughout the 1970’s. Nonetheless, sensitivity with heritage did not arise in relation to the meaning of environment and the people involved, but with the legacy of civilizations, their monuments, art, relics and the spirit of discovery.

Although one may say that after all, Egypt did come across westernization: “the agrarian reform, the struggle against imperialism, the advancement of industrialization, the completion of the Aswan High Dam, and the promotion of Arab unity” were aspects that contributed to the creation of a new social fabric. The “(...) new political freedom establishment of social justice and the removal of divisions between rich and poor” or the “(...) nationalization, public education, and equal opportunity in employment (...)”⁵⁰; were achievements attributed to Nasser’s era.

In contrast, the opposition and criticism raised for and by the Nubian people, who had suffered from being forced to relocate away from their homeland, were almost completely ignored⁵¹ by Egyptian authorities, “Nubian activists in Cairo put their community’s population at around 300,000 in Egypt; up to 60,000 were displaced in the 1960s, while the rest were either uprooted in the colonial era or had already moved farther afield looking for work”⁵². Up until today, the Nubian people are still fighting for their right for compensation and to return to their homeland.

This leads us to Maggie Ronayne (2005) dealing with the cultural and environmental impact of dams in Turkey, who points out that cultural heritage needs to be considered as more than the sum of relics and monuments; as it is the very “basis for the survival of communities now living in or recently displaced from reservoir areas”⁵³. By

49 G. LINS et al., *A Ciência e a Educação nas questões ambientais*, in: *Revista Sustinere*, Vol. 1. No. 1, 2013, pp. 11-12.

50 *Changing Egypt Offers Hope to Long-Marginalized Nubians*, in: *National Geographic*, 2014, <https://www.nationalgeographic.com/culture/article/140131-egypt-nubia-dams-nile-constitution-culture>.

51 M. BRENDEL, *Moderne — Macht — Morbid*, p. 355.

52 *Changing Egypt Offers Hope to Long-Marginalized Nubians. An ancient culture displaced by dams hopes for rebirth along the Nile*, in: *National Geographic*, 2014, <https://www.nationalgeographic.com/culture/article/140131-egypt-nubia-dams-nile-constitution-culture>.

53 M. RONAYNE — R. HARRIS — K. YILDIZ, *The cultural and environmental impact of large dams in southeast Turkey*, Kurdish Human Rights Project & National University of Ireland, 2005, pp. 5-6.



analogy, the Kurdish people and the Nubian people, if placed at the core of the viewpoint for the lukewarm programs, may contradict the statements that the impact assessment or archeological rescue operations created by the dam's construction were successful accomplishments.

The exceptional operation to study and rescue led in the archaeological sites in Nubia can be explained by the abundance and value of the threatened remains, the treasure's hunt spirit, the will of the Egyptian and Sudanese governments to somehow guarantee the heritage safeguarding, and the exercise of Egyptology by other nations, already consolidated in Europe. However, during the Nubian campaign and the archaeological operation which predates it, other cases of large dams which were acknowledge as successful did not receive the same attention.

Most of the current large dams are contemporary to the Aswan's one, or were built after 1970. For the dams built during the 1960s and 1970s, the policy of saving archaeological heritage appeared as an idea still too young to be applied. The Convention concerning the protection of the world, cultural and natural heritage was officially ratified in 1972, and from that moment on, tested in the Nubian region. The Article 4 of the Convention specifies, moreover, that the signatory countries must equip themselves with their own political instruments to protect their heritage, or, if necessary, to seek international cooperation. However, very few of the other dam constructions have benefited from the same media coverage or archaeological operations. On the other hand, the Convention specifies in which framework UNESCO can intervene, particularly in cases of requests for the support of international cooperation. The absence of UNESCO does not exclude archaeological interventions initiated by the concerned state. Laboratories in foreign universities or even an international cooperation independent from UNESCO have occurred worldwide since Aswan. Regardless of which institute made the Nubia Campaign successful, state agencies and universities are nowadays the ones leading archaeological missions in sites threatened by dams.

Concerning the hydroelectric plants built after Aswan, we can then consider four different asset management: 1, the study and rescue of relics led by the concerned state; 2, the study led by universities or private initiatives (foundations, museums, archaeological missions, institutes, etc.); 3, the request for international aid; and 4, the heritage's neglect.

The study and rescue of relics led by the concerned state means that the management of threatened heritage is deployed by that the state to study and protect it. In this case, we can quote the example of the Petit-Saut dam in French Guyana. In 1989, the public company *Electricité de France* — EDF, began to build a hydroelectric plant; 10% of the total cost of the dam was allocated to research, and particularly archaeological research. The archaeological mission aimed to inventory threatened sites and study them before their flooding, while no law had yet imposed preventive archeology in France (which was only regulated in 2001). The Petit-Saut archaeological operation took place over the entire period of the dam building and has brought to light 310 archaeological sites⁵⁴, whereas excavations and rescue programs were executed.

⁵⁴ S. VACHER — S. J. BRIAND — S. JEREMIE, *Amérindiens du Sinnamary (Guyane française)*, in: *Archéologie Française*, Vol. 70, 1998, p. 5.



Universities or private initiatives' studies are in many cases an archaeological operation preceding the flooding of the areas, carried out through expeditions often organized by foreign institutions. We can point out the case of three dams built in Turkey on the course of the Euphrates, between 1983 and 2000. From downstream to upstream, the first dam, Karkamis, flooded one important archeological site; the second one, Birecik, 17 sites; and Atatürk submerged 187 sites.⁵⁵ In total, 31 archaeological projects were thus set, mostly led by American, German and Turkish teams.

The Request for international aid takes place when a country cannot carry out its own missions. Several institutions can then intervene in a program for archaeological study and rescue campaigns. On various occasions, they respond to a call from the concerned country to safeguard its heritage. This is the case with the Merowe dam on the Nile. The Denarius dam, built on the Sudanese Nile, flooded parts of the Nubian heritage remain. A first call for the rescue of the monuments occurred in 1988. Because of the urgency caused by the beginning of the dam construction a second call for the rescue of the monuments happened in 2003. Numerous foreign archaeological missions responded. In this case, the excavations allowed a better historical understanding of this region, but the works were largely criticized. It can be emphasized that the priority was set on the heritage protection over the impacts on people and their way of living's disruption⁵⁶, nevertheless it was the case for a dam which seriously threatened humans, the environment and heritage.

The Heritage neglect can be pinpointed in cases where despite the awareness of the dangers represented by dams, the archeological site is flooded without proceeding to an archaeological investigation of any kind. Also on the African continent, the Niger River was exploited for its hydroelectric potential. The construction of the Kandadji dam has alerted concerns around the archaeological sites existing along the river⁵⁷, though so far with no agenda for archaeological inquiries.

While the archaeological sites in the Euphrates Valley were partially surveyed before the construction of the three dams, there are cases which were unable to benefit from the same attention. In 2020, the opening of the Ilisu dam in Turkish Kurdistan exposed the flood over 312 km² of the Euphrates Valley. The reservoir area covered the ancient and historic town of Hasankeyf, where archaeological remains have been existing over the span of 12.000 years. Facing the lack of action taken by the Turkish state, several NGOs have filed application to the European Court of Human Rights, but the Court rejected their cause⁵⁸. The European court cited the 4th article of the Heritage Convention, specifying that in the case of the absence of request from the country for international aid (in this case Turkey), the international aid cannot be mobilized,

55 N. MARCHETTI — F. FRANCI — G. BITELLI — F. ZAINA, *Archaeology and Dams in South-eastern Turkey: Post-Flooding Damage Assessment and Safeguarding Strategies on Cultural Heritage*, in: *Journal of Mediterranean Archaeology*, Vol. 33, No. 1, 2020, pp. 34–36.

56 H. HAFSASS-TSAKOS, *Ethical implications of salvage archaeology and dam building: The clash between archaeologists and local people in Daral-Manasir, Sudan*, in: *Journal of Social Archaeology*, Vol. 11, No. 1, 2011, p. 62.

57 A. MAGA, *Le Barrage de Kandadji et ses conséquences sur le Patrimoine Archéologique du Niger*, p. 52.

58 Presse release issued by the Register of the Court ECHR 072 (2019).



further specifying that a state is sovereign over its territory planning. The Heritage Convention's limits are there revealed.

The importance of heritage appears as a minor concern *vis-à-vis* the challenges of dam projects that involve economic growth, the role of foreign affairs, and the territory plans; in other words, the rearrangement of the territory following technical imperatives, designed by politicians, governments or technocrats. The Networks in hydraulics, electrical, political, chemical, environment, social, and agricultural branches are highly entangled and intertwined.⁵⁹ No, or very little popular participation is often observable, neither expert's opinions are requested in the decision. As an outcome of Aswan, for the first time a concern for both society and its heritage was jointly considered, which had been reflected during the World Heritage Convention. While "*The construction of the Aswan High Dam in Egypt drew unprecedented international attention to the protection of cultural heritage. At that time, many people thought they had to choose between culture and development, between flourishing crops and the traces of a glorious history. UNESCO has shown that we can have both.*"⁶⁰ At the time, such an official statement detonated from that hydroelectric power plants constructions, for the organization, and was equivalent to developing.

Kanchana Wangkeo, about the issue that cultural heritage is often threatened for reasons that the host states consider legitimate, questions why, and under which circumstances they might lawfully destroy the relics. She declares: "(...) *an international norm that privileges economic development over iconoclasm as a reason for destroying cultural heritage has developed, but that the norm increasingly places greater demands on host states, such as making a good faith effort to preserve cultural relicts or to mitigate the damaging effects of development projects*"⁶¹. Even so, the mishandling of relict and goods can disadvantage these countries in their international relations, as they can suffer sanctions or be excluded from the world community. Wangkeo argues, whatsoever, that these norms are no more effective, as a country can easily take advantage of the "*development justification to suit their purposes*"⁶².

This article has tried to discuss the aspects and features in which acts of militants (perhaps) or independent and neutral position adopted by the Egyptian state did not prejudice the formation of an international solidarity for the cause of the world heritage. How it happened and what can be learnt, as well as the time-line of facts meaning, appears to be rather contradictory.

The moving of these temples can appear to us as a metaphor, symbolizing a greater opposition between cultural and political views and worldviews. They chose to the acknowledge the saving monuments and relics, but do not deepen the discussion about the impacts on people and nature caused by dams. Overall, the expertise gathered

59 For T. MITCHELL, *Rule of Experts*, p. 33: "*the political struggle to control rent circuits was a battle to build and control these interconnected circuits. Moreover, it was through these paths — dams, irrigation, and sugar cultivation — that the mosquito had entered Egypt*".

60 UNESCO Abu Simbel: *The campaign that revolutionized the international approach to safeguarding heritage*, UNESCO Paris France, 2020, https://en.unesco.org/70years/abu_simbel_safeguarding_heritage pdf, accessed on 21 March 2020.

61 K. WANGKEO, *Monumental Challenges*, p. 187.

62 *Ibidem*, p. 187.

from this experience was translated into new approaches, now present in the scope of environmental and cultural impacts assessment, involving preventive archeology practices for dam projects, but similarly, the application of technical and legal standards or even ethical matters, still lacks an efficient institutional framework. The Heritage Convention is an effective tool to help countries protecting their heritage, although it seems to be hardly used in the case of dams. While the effort of UNESCO in the campaign is an example of cooperation in troubled times, its legacy is rather discouraging, as the same kind of infrastructures still endanger ecosystems, cultural and natural heritage, ways of life, whereas dams are still synonym with development.

This analysis reveals that an (in favor of undertaking the Aswan High Dam) is imperative, as well as the use of modernization and development justifying the business. Therefore, geopolitics of dams arise as a key factor for conceiving the current practices for preventive archeology and heritage protection in the context of environmental assessment, to be surveyed along with nature and social assessment, as opposed to separately. We may recall Timothy Mitchell, who has spotted the manufacturing of reality as an antagonistic opposition between nature and society, which ends up reinforcing the imposition of human ideas and intentions under something that cannot speak for its own cause⁶³, such as a river, a valley, or a monument. There is a symbolic detachment operating between the sense of heritage preservation (musealization or re-signify as a tourist attraction), and the violence that it leads to, when it becomes a barrier to development.



63 T. MITCHELL, *Rule of Experts*, p. 50.