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The River Nile: From Abundance to Scarcity



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I came to the Wissenschaftskolleg hoping to finish a work that I had started many years ago on the River Nile. This wondrous river has been a source of fascination to me since my early youth. I wanted to know more about its origin, its developmental history and how man made use of it across the course of history. The river was the subject of many years of fieldwork, often in association with archeological expeditions; the work involved considerable research in the colossal literature. My consulting work exposed me to the wealth of borehole data from the many wells drilled in the delta in search of oil. My field notes and accumulated data awaited the time when they could be synthesized into a whole. That time came with the invitation I received from the Wissenschaftskolleg, which I decided to use fully for this sole purpose. During my stay at the Kolleg, I set aside my private work and devoted my time fully to the task of finishing a book on the Nile. I did not receive forwarded mail which was left to accumulate in piles in my office during my absence. In Berlin I missed the German-language classes, the great cultural life of the city and the festivities of the vibrant and new Berlin of 1990. In spite of this I have not been able to finish the work I had intended to do; the book I had hoped to have finished was still many months away when I left the Kolleg. One of the reasons for this delay was my decision, long after the first draft was written, to address the book to a different and wider readership than the one I had started writing my book to. Rather than writing a specialized book, I now wanted to write a more popular book. I wanted to avoid the use of

technical terms and present the scientific results in a readable language. Throughout my career I have written books that were very specialized and were of interest only to a very small group of professionals, who read my books mainly to find the mistakes in them or to see whether I had mentioned their names and referred to their works. At my age I wanted to write something different. The results I had come to looked exciting and I wanted more people to share them with me.

The Kolleg offered the proper climate for a book of the type I wanted to write. My year's stay was the first year in my life in which I was free to pursue the things I wanted without distraction. I did not have to sit on committees, lecture yawning students, write reports under pressure of deadlines, spend long hours in airports, make presentations to bored corporate members or lobby for contracts. I was a free man in an efficiently-run institute. Every member of the staff was pleasant and helpful. The library was magnificent. My secluded social life was compensated for by the breakfast and lunch hours with their gracefully presented food.

There is a fascination about the Nile. Not only did it support one of the oldest hydraulic civilizations that was destined to leave its mark on the future of man, but it also has unique physical features which make it truly a river without rival. It is the only river that has been able to carry the waters of equatorial Africa across the great barren Sahara to the Mediterranean Sea, in spite of the small amount of water which the river carries when compared to its length or the area of its basin. For a distance of almost 2800 kilometers across the stretch of the Saharan desert, the river does not receive any significant water supply.

The shape of the Nile as we know it today is a very recent development; it is but the last stage of a continuously evolving river which has changed its face many times before it assumed its present look. The present-day river is complex. It is made up of a number of basins with gentle gradients which are connected by swift-flowing and steeply-sloping rivers. The interconnection of these basins and their integration into the modern river system occurred only during the last wet period which affected Africa after the retreat of the ice of the last glacial some 10000 years ago; the modern Nile is indeed the child of that wet phase. Prior to this, the rivers and basins which constitute the present river were disconnected, each forming a closed basin with no access to the sea; for a long time, there was not enough precipitation to allow the basins to overflow their banks and join other basins to form a flowing river.

Since the end of the wet phase, which started the modern river some 4000 years ago, the flow of the river has tended to decline steadily. Within that general trend and throughout its history, the flow has also fluctuated greatly. The present-day drought, which is ravaging the Sahel region of

Africa and reducing the flows of the Nile to unprecedented levels, is but another cycle of a commonly-occurring phenomenon, whereby sequences of low Nile flows or high Nile flows tend to persist. The present-day drought is, therefore, likely to continue.

Historically, successive years of low or high Nile spelled disaster for Egypt, the only basin state which until recently was the sole user of the waters of the Nile for irrigated agriculture. The consequence of a low Nile is famine, an all-too-recurrent dark spot in the history of Egypt, immortalized by the descriptions of the Arab medieval writers. The consequences of a series of low Niles today would be even more devastating. Populations are growing rapidly, not only in Egypt but throughout the basin, exerting pressure on the limited water resource as rain agriculture gives way to irrigated agriculture in the upper Nile basin states. The Nile is no longer the river of Egypt as it used to be; all basin states are claiming a share of its dwindling supplies. For Egypt, the most populous country in the basin, rising demands for food, driven both demographically and by rising standards of living, can only be met with more water, which is not only not forthcoming but also not under its control.

The book I had been engaged in writing during my stay at the Wissenschaftskolleg ist one that addresses the problems that will be facing the nations along the river as a result of the expected lower supply and rising demand. It was this that dictated the title of the book.