



WATER POVERTY AND DEVELOPMENT IMPERATIVES: A DEFENCE OF ETHICS FOR SUSTAINABLE WATER RESOURCE USE AND MANAGEMENT IN SUB-SAHARA AFRICA

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Abstract

As the world gathers momentum for the realization of the Sustainable Development Goals (SDGs) by 2030, it is pertinent for nations and regions to begin to evaluate and address specific challenges to development imperatives. The problem of shortage of quality water for consumption in Sub-Saharan Africa (SSA) has been widely discussed by different academic and technical experts using diverse platforms. There are various statistics revealing a gloomy picture of water poverty on the continent despite its relative abundance of natural water resources. While the challenges and the issues that characterize the problem have received critical attention and strategies for better resource management for sustainable provision of quality and adequate water have been suggested, water poverty continues to ravage the region. This research adopted the Secondary Data Analysis method to investigate the fundamentals of the problem. The paper revealed the central roles of unethical human disposition to resource consumption and unregulated consumption pattern in exacerbating the problem of water poverty in Africa. Flagrant abuses and disregard for environmental resource management instruments in pursuit of economic and subsistent opportunities constitute major catalyst for the increasing water poverty in Africa. In light of the above, the paper explored the social justice principle of the blue ethics to contribute to the on-going discussion on water resource management in Africa.

Keywords: Africa, Ethics, Justice, Resource Management, Sustainable Environment, Water Poverty

Introduction

Water is essential for all life. Clean fresh water is critical to our lives This vital but limited resource constitutes a key element for a life with dignity and a condition of all human rights (Benoit & Fiechter-Widemann, 2019). Availability and access to water is a precondition for the implementation and access to all other human rights. In essence, right of access to

quality water could be regarded as a foundational right of all living beings. Even the right to life, which is a fundamental right, may be either promoted or frustrated by provision and access to water or lack of it. The global vision of sustainable development, which literally advocates a life of dignity for all humans, may be incomplete and all efforts may be fruitless without adequate consideration for water provision and access.

To this effect, water for all is pivotal to the United Nations Sustainable Development Goals (SDGs, Goal 6) (United Nations, 2015). As a result of the importance and centrality of water as a resource for socio-economic development and its impact on global political stability, there have been many international statements on water, each focusing on different aspects of water use and management. Some of these documents include: the United Nations Human Rights declaration 1948, Art 3 and Art 25 (United Nations, 2015); the International Covenant on Economic, Social and Cultural Rights (ICESCR), 1966, Art 11 (United Nations, 1967); the International Covenant on Civil and Political Rights (ICCPR), 1966, Art 6 (United Nations, 1976); the Mar del Plata Action Plan issued at the 1977 United Nations Water Conference (United Nations, 1977); the 1992 Dublin Principles from the United Nations International Conference on Water and Sustainable Development (United Nations, 1992); the United Nations Economic, Social and Cultural Rights Commentary No 15, 2002, Art 11 and 12. (United Nations, 2002); the July 2010 United Nations General Assembly 64/292 resolution on access to water and sanitation (United Nations General Assembly, 2010); the Water for Life statement issued in 2006 by the World Council of Churches/Ecumenical Water Network (World Council of Churches, 2006); the Ecumenical Swiss-Brazilian Water Declaration in 2005 (Federation of Swiss Protestant Churches, 2005) and the 2019 Blue Ethics Principles and Guidelines by Globethics.net Board (Benoit & Fiechter-Widemann, 2019).

These documents constitute the evidence of the global efforts at addressing emerging and dynamic challenges of water scarcity

and its attendant consequences on human existence. They also underscore the global scope of the water discourse. Due to the nature of economic, political and social relations among regions, nations, states and peoples in the contemporary globalized world, the water concerns (stress, threats, and prospects) have assumed a global dimension. However, the level, nature and impacts of water challenges and subsequent solutions are diverse and region specific. The burden of water stress is heavier in some parts of the world than others. Environmental, climatic, social, demographic and institutional differences have accounted for the variations in water related challenges across the globe. The rate and quality of response to the problem of water shortage by national governments and regional leaders is uneven. In this respect, Sub-Saharan Africa suffers greater levels of water stress than many other regions in the world (Christopher, 2006). In the developing world, such as on the African Continent, the lack of clean fresh water is a very real issue for many (Greentumble, 2015). This paper relies on secondary data statistics and documentary information from relevant and reliable institutions, professionals and scholars. The author adopts literature review to identify gaps in the existing discourse on water poverty in Africa and attempt a theoretical formulation of a policy direction for the attainment of water access and security by 2030. The next section of this paper is an attempt to examine the interconnection between supply and access to water resource and development imperatives, some of which are enlisted in the United Nations Sustainable Development Goals (SDGs).

Water and Development Imperatives

Water is considered as the most critical resource for sustainable development in most Mediterranean countries because of their level of economic growth It is essential not

only for agriculture, industry and economic growth, but also the most important component of the environment, with significant impact on health and nature conservation (Chartzoulakis and Bertaki, 2015) Social and economic activities revolve round the availability of and access to water resources. Therefore, water is at the center of economic and social development (World Bank, 2017). Water touches every aspect of development and links it with nearly every Sustainable Development Goal (SDG) (World Bank, 2019). It is a major driver of economic growth, the backbone for healthy ecosystems and the basic support for existence.

Development imperatives constitute the basic and essential requirements for meaningful livelihood. The major elements of these imperatives include but not limited to access to good food, healthy body and mind and security of lives and property from natural and human aggressions, implying that food, health and security are essential concerns of every society. Human freedoms and capacities are relative to the degree of access to food, health and security that the individual has.

The link between water resources and these basic elements of development imperatives is not far-fetched. Agriculture, which provides the means for food, requires extensive water supplies. Some efforts to conserve and minimize water for agricultural purposes are hereby acknowledged. Proper sanitation, which is essential for healthy living, requires adequate availability and access to clean and safe water. In a study conducted by the United Nations, “unsafe water is responsible for around 80 percent of diseases and 30 percent of deaths in developing countries throughout the world” (Christopher, 2006). Health issues could manifest as a result of lack of safe water for

sanitation, drinking and nutrition. If water is readily available – and its supply outweighs the demand – one may imagine the potential security crisis when the same water source is no more sufficient to meet the water need of the community. Such increased demand for limited water resources is capable of exacerbating existing community tensions and causing armed conflicts. For instance, it is reported that the crisis in Darfur stems in part from disputes over water (Christopher, 2006). This is not surprising because Sub-Saharan Africa is home to 17 major river basins shared by 35 countries that will all want to have a stake in existing water resources (Greentumble, 2015). Water scarcity could further trigger conflicts and human displacement if the water source is cross-border. To this effect, access to water becomes a major factor in achieving and sustaining peace among communities and nations.

These tripartite imperatives – that is, food, health and security – are foundational to economic growth and overall sustainable development. Consequently, experts note that improving water and sanitation programmes is crucial to spurring growth and sustaining economic development (Christopher, 2006). It is said that economic growth is a 'thirsty' business. Water is a vital factor of production, so diminishing water supplies translates into slower [economic] growth (World Bank, 2019). From the foregoing, it is evident that water is crucial in determining whether Africa will achieve and sustain the Sustainable Development Goals (SDGs).

Conceptualizing Water Poverty in Africa

In this paper, we refer to water poverty as the shortfall in the availability of and access to water resources for individuals, households and communities to meet their water needs. Quantitatively, water poverty is the inability to access the minimum water requirement of

1,700 cubic meters (m³) of water per person per year as benchmarked by the United Nations (UNDP, 2006). It is a phenomenon that captures people's inability to meet their water needs as a result of issues of availability or access. Water poverty in households is a direct consequence of the national failure to address issues of water scarcity within its boundary. There is water poverty when a nation or region is unable to afford the cost of sustainable clean water to all people at all times (Feitelson and Chenoweth, 2002). As it has been earlier established that there is enough water on the planet for human consumption in this paper, the issue of availability and access to clean water is clearly about cost and affordability. The World Bank warned that increasing access is not enough. Improving water quality by reducing pollution and increasing water-management efficiency are critical to addressing water poverty on the continent. To attain the acceptable level of quality of water, cost of water must include the cost to prevent pollution and treat already polluted water sources. These tasks are inevitable in order to make people have the required water for a decent life. In most cases, it is not within the powers of the individuals and households to undertake these essential tasks. Therefore, water poverty is the situation where the individual cannot afford the cost of sustainable clean water required for consumption at all times. The quality of water in many African communities has been compromised as a result of pollution from industrial activities and other forms of environmental abuse in and around such communities. It is prudent for communities and governments to take proactive measures to prevent pollution of water resources because water loses its environmental, economic and social values once it is contaminated. The physical availability and unlimited access

notwithstanding, polluted water resources are unsafe and unfit for consumption, thereby leaving the community to scramble for clean safe water. This is the condition of many communities in Sub-Saharan Africa. Therefore, quality of water is a major consideration in the conceptualization and understanding of the idea of water poverty.

One may question the difference between water scarcity, water poverty and water stress. Water scarcity is the situation when water resources in a region are insufficient for the needs of that particular area (The Last Well, 2019). But in many cases, people who have the economic power and households with steady incomes are able to access sufficient quality water for their needs even when they live in regions with water scarcity. Therefore, water poverty is a phenomenon that captures the particular vulnerable condition of an individual and household rather than the general regional or national burden. The link between water scarcity and water poverty is that scarcity of water resources could exacerbate water poverty because it will cost more and require more money to access the scarce water. Access to quality water may get out of reach of the majority, especially the low income and poor individuals. If there is equal access to clean water for everyone at all times, there will probably be no reason to discuss water poverty. Water stress refers to economic, social or environmental problems caused by unmet water needs (Christopher, 2006). This description implies that water stress is the outcome of individual, household, national and regional water poverty. In the following sub-section, the paper examines some of the causes of water scarcity in Africa.

Some Causes of Water Scarcity in Africa

The drastic change in climatic pattern across the regions in Africa has led to widespread shortage of accessible water resources. The burden of climate fluctuations is heavier in

Africa because the continent is subject to more extreme climate variability than other regions (Christopher, 2006). For instance, with less rainfall than in the past, it has become difficult for local populations in Africa to continue their traditional agricultural practices such as livestock grazing and farming. Underlying the extreme climate fluctuations in Africa is the issue of climate change, which has been blamed on unsustainable industrial activities within and outside the continent. Climate change is one of the major factors exacerbating climate disasters and socio-economic disruptions in Africa. A major manifestation of climate problems is water scarcity leading to water poverty in many communities and households across the continent. As a result of climate change, clean, safe and potable water sources are diminishing at a rapid and steady pace. Fossil-fuel companies involved in mining of coal and oil exploration are major contributors to environmental and climate disasters in Africa. With extreme weather conditions and unpredictable temperatures owing to climate change, dams and reservoirs keep running dry, and surface water sources keep shrinking.

Next to the climate change problem is the issue of widespread pollution of water resources and farmlands in Africa. Many economic activities in terms of explorations, productions and constructions, have imposed a great deal of environmental and social hazards on the populations in Africa and their natural resources, including water. Mining disasters have contributed immensely to water pollution in Africa. Whereas water used in farming and households can cycle back into drinking water reserves, water used in mining is irretrievably contaminated (350Africa.org, 2016). Operations of the International Oil Companies (IOCs) in Africa often result in

massive oil spills across lands, forests and sea in the Niger-Delta region of Nigeria. Oil related chemicals spill on available surfaces across the lands and water in the operating areas (Adekeye, 2019a). Report has it that the dumping of industrial waste into water ways, unregulated agrochemicals, and oil spills are common practices in Africa, leading to the pollution of inland water resources that will likely last for generations (Greentumble, 2015). It should be added that the immediate consequences of these practices are increased pollution and destruction of river catchments which in turn lead to loss of fresh water resources and water poverty in many parts on the continent.

Just like every part of the world, the amount of water in the ecosystem has been roughly constant for millennia but, over that time, the continent has added over a billion people. As population grows in urban areas and water demand necessarily increases, there is intense competition for access to the available resources. This competition in turn increases the potential for conflicts of diverse magnitude. The water scarcity which is consequent upon the growth in population exposes the people to water poverty, especially the low-income persons and households within the population. To some commentators, water stress in Africa is more endemic in fast-growing urban areas (Greentumble, 2015). However, the experience in major cities of Nigeria (the country with highest population in Africa) shows that water stress is more pronounced in very rural communities than urban settlements. A good number of urban residents have access to alternative water sources unlike many of their rural counterparts who depend solely on surface water (rivers, streams and ponds) and rainfall for their water supplies. Many residents of rural communities do not have the economic means to access alternative water sources

coupled with the conspicuous neglect that rural communities suffer from most governments across Africa. This implies that the issues of economic power of individuals and household incomes coupled with infrastructure for supply and distribution could be more germane to policy makers in understanding, analysing and solving the problem of water poverty in Africa.

Although the lack of sufficient infrastructure for supplying and distributing quality water to people has been variously identified as one of the major constraints to water access in developing countries (Greentumble, 2015; Christopher, 2006), this paper considers lack of strong institutions as a more fundamental problem. Institutions are necessary to take charge of the maintenance and management that would make the infrastructure sustainable (IEG, 2010). Investments on infrastructure may not yield desired results without strong institutions. Institutions articulate panoramic perception of the problem and subsequently provide holistic solution to such a problem. Little wonder the Independent Evaluation Group (IEG) lamented that “bank projects that aim to reduce vulnerability often focus mostly on infrastructure reconstruction, even when environmental restoration may be more strategically appropriate” (IEG, 2010). In other words, many of the issues associated with water poverty in Africa, which include those that have been earlier identified and others such as poor resource management, inadequate financing and low levels of investment (World Bank, 2017), are possible manifestations of absolute lack of appropriate institutions. In cases where the institutions are available, they are at best moribund, fragile and deficient.

A fundamental factor in the creation and

perpetuation of the phenomenon of water poverty and subsequent stress in Africa is the failure to recognize and respect the ethics of water resources in relation to its ontological status, use, management and sustainability. The moral disposition that drives individual and group consumption patterns and economic choices is a critical element that constantly plays out in the generation, perpetuation and possible solution of the problem. One could posit that the primary cause of water poverty in many parts of Africa is identical with that of other forms of poverty and bleak human development indices that permeate many parts of the continent. Electoral infractions (the basis for inept leadership), financial impropriety, official and corporate grafts, judicial manipulations and widespread unethical tendencies in both private and public spheres constitute the foundation of the weakness and fragility of public institutions, making more Africans vulnerable to water poverty than other nations. Therefore, raising ethical consciousness for the purpose of achieving sustainable water resource use and management in Africa becomes a vital task that this paper attempts in the following section.

Blue Ethics: Ethical Perspectives to Water Resource Use and Management in Africa

The moral and ethical dispositions of each and every stakeholder and interest in water resources in Africa are a major determinant of the direction and quality of response to the current shortage of water supply. Blue Ethics explores and adapts relevant philosophical and ethical principles such as utilitarianism, anthropocentrism, biocentrism, ecocentrism, social justice, sustainability, and so on, for the critical analysis of human engagement with water resources. It provides alternative actions and policy directions for collective success in the fight against water poverty on the continent. Blue ethics, also known as

water ethics, provides prescriptions in terms of attitudes, approaches and choices which should be made to terminate the scourge of water poverty and position Africa on the path of water security for her teeming populations. It is an aspect of development ethics that concerns water resources use and management as major component of sustainable development. For want of space, this paper examines and applies blue ethics from the perspective of social justice to some pertinent issues regarding water use and management in Africa.

Inclusive Quality Water Provision: Fulfilling the Social Justice Obligation in Africa

The dangers of not meeting water needs are very real, ranging from hunger, disease, armed conflicts, illiteracy, insecurity, poverty and death among others. These conditions easily confirm the importance of quality and safe water in private and public lives characterized by meaning and dignity. As earlier mentioned, water is crucial to the essence of every living being and all human beings in particular. Until every living human being has enough water to meet basic needs for survival and sanitation, and water supply for the next generation of Africans is secured, governments and nations will continue to increase capacities for water security. Beyond mere political rhetorics about water poverty in Africa, governments and all stakeholders on the continent must approach the issue of water poverty with seriousness just as the developed nations where experts and governments are concerned about improving capacity for water security for the present and future generations. Just like any other development indices such as health, power, security, education and infrastructure, it is the 'norm' that most governments in Africa, for some reasons,

concentrate on providing and improving access to quality water in few major cities at the exclusion of the vast populations in the quasi-urban and rural settlements. Some social analysts have blamed this behaviour of governments as responsible for the mass migration from rural settlements to cities and the resultant demographic pressures on the cities. Currently, there is evident inequality in human access to clean water across regions and countries in Africa. Apart from the economic, social, and political imperatives of changing the current narrative of 'exclusion' to that of 'inclusive' development plans, the point at this juncture is that it is also a requirement for fulfilling the social justice mandate of every legitimate government across the continent.

Social justice presupposes a society or a group of people who have rightful claims to common means of livelihood or resources and power to allocate resources. It entails the distribution of material resources and intangible opportunities (distributive justice) (Adekeye, 2019b). Social justice is a set of principles that analyses and prescribes what the proper social order, which can guarantee human flourishing should be (Nielsen, 1996). It encapsulates every aspect of institutional rules and relations, which are subject to potential collective decision (Ujomu, 2002). Social justice provides every individual within the society with equitable freedom for the development of potentials and capacities.

Social justice is a principle that equally considers the condition of everyone: the *self* and the *other*. The 'golden rule' is a key ethical maxim in addressing many of the factors that have made it impossible for everyone on the continent to have access to quality water. Simply, the golden rule prescribes that one does to others as he or she would have others do in turn. For example, business entities that use water resources or have dealings with water resources in one form or another

should realise that such water resources are equally important to other users. While they consider the survival of their businesses, thorough consideration should be accorded the livelihood of others who depend on the water as well as potential users of the resources. To this end, water usage cannot be limited to the perspective and need of the current generation. Rather, it is necessary to take future generations into account (Feitelson and Chenoweth, 2002).

Interestingly, the golden rule has been reinterpreted to conceal an obligation, where the agent becomes the patient's debtor (Fiechter-Widemann, 2019a). Beyond the classical interpretation of the maxim which represents justice as reciprocity, the new interpretation emphasizes generosity, gift and empathy (Ricoeur, 1995). Inclusive provision of quality water in Africa demands concerted and stakeholder-driven Corporate Social Responsibility on the part of business organizations and wealthy individuals. Such interventions could include provision of funds and grants for building water infrastructures, water treatment facilities and sponsoring campaign against water pollution and other abuses. This dimension of the golden rule also dictates a sense of duty on richer African countries to assist their counterpart countries with heavier burden of water scarcity through diverse interventions such as technical, financial, and political assistance.

The concept of human dignity is an important aspect of the principle of social justice. It is borne out of an idealised value of the human being. There is a set of minimum or basic conditions of livelihood that is envisaged for every member of the human race. These conditions include certain rights and freedoms such as right to life and freedom of expression. But, more importantly, the idea of human dignity

consists in the individual actually living a decent life. In the context of this paper, the minimum expression of human dignity or dignity of human person is the ability to access potable water to quench one's thirst and maintain good hygiene through constant access to quality water. Social justice demands that all humans be equally provided with this basic measure of dignity which impacts on human survival and development. As a principle, social justice increases the capacity of the society to expand the 'real freedoms' that people enjoy. The notion of 'real freedom' implies an inclusive understanding which accommodates both the positive and negative conceptions of freedom. In its positive conception, freedom involves the ability of the individual to express his authenticity such as participation in the decisions that affect his live, the dignity expressed in being recognized and respected by other people, and a fair system that ensures equity. In its negative conception, freedom involves escaping those hurdles or barriers against the realization of personal happiness [and fulfilment] (Adekeye, 2019c). Human development is measured in relation to the individual's access to these dimensions of freedom. It goes without saying that lack of clean and safe water for drinking and sanitation is a major threat to human capital development in Africa. The lack of access to quality water constitutes the basis of 'unfreedom' such as poverty, diseases, illiteracy, insecurity, and death that millions of African populations suffer. It is a major deprivation of opportunities for many individuals and households to move up the social and economic ladder. Unfortunately, water poverty on the continent has weakened the democratic capacity of many countries by an indirect exclusion from political participation. No wonder, development, and indeed civilization are described as a process of expanding the real freedoms that people

enjoy (Adekeye, 2019c). Availability and access to clean and safe water for sanitation and other domestic needs are fundamental in guaranteeing substantive freedom that people deserve.

Water Management Paradigm for Sustainable Water Access in Africa

Natural resources management in general and water resources management in particular are currently undergoing a major paradigm shift (Pahl-Wostl C., *et al*, 2007). This paradigm shift is inspired by the following considerations:

Social Consideration: The concept of water as a human right was developed and adopted by the United Nations General Assembly in July 2010. It stipulates that every human being has right to water. Considering the unequal distribution and access to water across the globe in general and Africa in particular, this concept raises critical moral questions. If water is a human right, whose responsibility is it to guarantee this right and who is to be held responsible in situations of water crisis? The challenge with the concept of water as a human right is that it, just like any other positive freedom, implies a duty to help others (Fiechter-Widemann, 2019b). It is not certain upon whom this duty is imposed. This challenge leaves the vulnerable, especially in Africa, with nothing more than simple statements of unrealistic hope because there is no legal force that imposes such duty on any group of individuals. Until the concept of water as a human right becomes concretised through constitutional frameworks in African countries, the concept will remain a prerogative without any substantial commitment to improving the water condition on the part of governments.

Economic Consideration: As new realities began to unfold, many of the orthodoxies became questionable and the need to review

some traditional conceptions of the human world becomes apparent. Such is the concept of water as an economic good. The basic premise of this concept is that “the moment a good begins to become scarce, economic theory enters the picture” (Fiechter-Widemann, 2019b). In 1992, a revolutionary principle of water as an economic good was moved by some World Meteorological Organization (WMO) experts in Dublin. Before this time, water was considered and treated as a 'free good' of little value. According to them, this traditional perception about water has been largely responsible for waste and poor management of water resources. Hence, the aim of the Dublin principle of water as an economic good was to mitigate water waste especially in agriculture. In the same economic consideration, *Water Pricing Policy* was advocated, which “will be the basis for promoting conservation, reducing losses and mobilizing resources. Furthermore, it could affect cropping patterns, income distribution, efficiency of water management, and generation of additional revenue, which could be used to operate and maintain water projects” (Chartzoulakis and Bertaki, 2015). The new principle will validate and encourage private sector participation in the provision and supply of quality, safe and clean water as a viable option for enhanced efficiency and accountability. Countries and regions are now provided with alternatives for the administration and dispensation of quality water for their respective populations, thereby increasing availability and access.

The implication of the new principle of water as an economic good on the management of water resources in Africa is that it has broadened the scope of water management in Africa. Water may be free in its natural composition and deposition, either as a massive flowing surface entity or as inexhaustible volume underneath the earth;

it is obvious that getting water available and accessible for consumption is not free but what does it cost? We know it entails huge financial investments which in turn determine the degree of efficiency and quality of service delivery. Hence, enlisting the participation of the private sector could be apt in attaining an appropriate estimation of the economic cost and value of water resources. The water management paradigm in Africa should be such that captures an estimated cost of water resources for different purposes, and make people use water responsibly by minimizing waste and eradicating pollution. A level of democratisation must be allowed for private investors to use their finance and expertise to deliver access to quality water, while government should provide a favourable business environment through enabling policies and legal frameworks.

It is worthy of note that “participatory management and stakeholder involvement are becoming increasingly important [in water resources management]” (Pahl-Wostl C. *et al*, 2007). Sustainable water management demands the participation and ownership by the people at all levels of conceptualization and implementation. The efficiency of water management policies will be to the extent at which it expresses the real interests of the people. People's participation in water resource management could be a very effective way of alleviating their vulnerability in the sense that direct and immediate impacts are easily achieved. The two options herein proposed as paradigm for water resource management in Africa are considered worthwhile; however, the choice and adoption of the most appropriate model should depend on local contexts with respect to social, geographical, political, economic and cultural diversity on the continent. Conclusion

Because of the increasing problems, man has begun to realise that he can no longer follow a “use and discard” methodology either with water resources or any other natural resource. As a result, the need for a consistent policy of rational management of water resources has become evident (Chartzoulakis and Bertaki, 2015). As we have seen in the preceding sections, blue ethics is an all-encompassing discourse which has been wittingly explored in this paper for the conceptualization and analysis of the problem of water poverty in Africa. The principle of social justice was extensively discussed and adopted as the ethical basis for inclusive provision of water.

Some of the thoughts in this paper may propel further investigations by scholars for subsequent contributions in the water discourse. More importantly, it would be considerably valuable for policy makers and public institutions to critically engage some of the assertions and proposals enunciated in this work.

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