

INTERNATIONAL JUSTICE, WATER AND RESPECT FOR CREATION

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Preface

As a layman to the subject matter, I follow the simple approach of framing the problem(s) as suggested in the title, going about data collection¹ with such a frame and undertake an analysis with a view to identifying solutions. These are then the questions that have guided my enquiry. What is the water problem? How does it manifest itself at the international level? Why does water have to do with (international) justice? And respect for Creation?

The Significance of Water and the Water Problem

Water is a significant element of Creation. Human life and the life of the myriad species depend on water in a critical way. Moreover, the trouble is that water, unlike oil but like air, has no substitute. What is the problem? In its first *World Water Development Report*² published in 2003, the United Nations told readers that we are in the midst of a water crisis. Is the water crisis real? Is there any controversy? To simplify the discussion, let's focus on water for agriculture.

Agriculture is the dominant water user, with an estimated amount at 2,490 km³, i.e. 74% of the total global blue water withdrawal. The corresponding percentages for industrial and domestic use are 18% and 8%

¹ Given the time constraints, I have in fact failed to consult quite a number of seemingly relevant literature that is not available locally.

² World Water Assessment Programme of the United Nations, *Water for People, Water for Life: The United Nations World Water Development Report*, publishing in 2003 jointly by UNESCO and Berghahn Books.

respectively. Narrowing the argument about the crisis to agriculture, the International Water Management Institute presented a comprehensive assessment report³ to the World Water Week in Stockholm, 2006. The assessment finds that over the next 50 years, there is enough land, water and human capacity to produce enough food for a growing population. This is based on several promising trends of development, such as the growth of water productivity and the increased global trade in virtual water embodied in food exports for the relief of local water stress. In a sense, there is no crisis looming. But the report also admits many more disturbing trends in terms of rising demands for water resources as a result of population growth and urbanization, increase in wastewater due to mismanagement and modern life-styles, degradation of water quality because of industrialization, depletion of water by evapotranspiration, damages to the environment and ecosystems caused by over-exploitation of water resources. On balance, the conclusion is that there is a water gap of up to 5,000 additional cubic kilometers of water to produce enough food by 2050.

According to the UN World Water Development Report, the key problem is that water supplies are falling while the demand is growing. Such a demand is driven mainly by population growth, agricultural production, energy requirements, urbanization, industrialization, recreation and tourism. Over the next 20 years, the average supply of water worldwide per person is expected to drop by a third. By the year 2025, water withdrawal will increase by 50 percent in developing countries and 18 percent in developed countries.

While water for food remains the dominant issue at the international scene, the problem of water has many faces, ranging from sanitation, health, energy production, environmental equity, poverty alleviation, to the sustainability of biodiversity. Many of the issues concerned are beyond the scope of this commentary. For our specific purpose, the water problem must be reframed with specific reference to the issue of justice at the global level and that of the respect for Creation.

With reference to international justice, the water problem is related to poverty, equity and peace. In terms of the respect for Creation, the problem of water is largely a matter of attitudes and behavior. There are particular ways of thinking and acting at the domestic as well as international levels that have contributed to the water crisis.

³ *Water for Food, Water for Life: Insights from the Comprehensive Assessment of Water Management in Agriculture*. A summary of the book can be downloaded from the official website of the Institute at <http://www.iwmi.cgiar.org/assessment/>.

Water, Poverty and Equity (Justice)

The story of water, or more precisely fresh water, is both scientific-technological and politico-economic. Over the ages, civilizations thrive and people get rich where the supply of water is abundant. When rivers run dry, cities or farms collapse and the inhabitants become poor. It thus seems that poverty is caused by the physical scarcity of fresh water. Many manifestations of poverty in South Asia and sub-Saharan Africa such as hunger, malnutrition, infectious diseases and poor health are results of shortage in food and poor living conditions which are in turn caused by the lack of water for irrigation or sanitation. Is then the physical scarcity of water a culprit of poverty that international efforts should come to the rescue?

A more technically accurate approach must leave the *stored* resources of fresh water that is admittedly scarce, i.e. about only 2.5% of the global total. As argued by Taikan Oki and Shinjiro Kanae,⁴ a more adequate measure of water availability is the 45,500 km³/year of annual discharge, which flows mainly through the rivers from continents to the sea. This is a volume of water much more than the global annual water withdrawal of 3800 km³/year. In other words, the right concept is not physical scarcity of water, but politico-economic accessibility to water.

Access to water can be secured by resources technology and management; it can also be resolved by trade. All these mean that technology, management, and trade can vary widely along the poverty-wealth spectrum. As such, the problem of water scarcity is not a business of physical nature that people and nations happen to live in. It is a matter of human choice within certain parameters of social relations. Hence, it can be a subject of justice, domestic, regional, or international.

Going back to the relation between poverty and the water problem, the story can be told the other way round: The water problem is the result of poverty. Compared to the poor, the rich have no water problem since they have better and secured access to fresh water. For instance, 'virtual water trade', i.e. transporting water over long distances across borders, has been saving water-stressed Hong Kong for decades. In similar vein, even though the environment is arid, Israel can afford the technology to desalinate ocean water for human use. Political economy can help a great deal to

⁴ 'Global Hydrological Cycles and World Water Resources' in *Science*, Vol. 313. no. 5790 (25 August 2006), pp. 1068-1072.

redress domestic injustice in water supply elsewhere. In India, for example, poor farmers enjoy heavily subsidized electricity to operate their pumps (the acquisition of them may have also been subsidized) to harvest groundwater for irrigation and domestic use. In situation like this, public health conditions often improve and food production increases. One may therefore conclude that the water problem is more of accessibility than of physical scarcity. Therefore, securing accessibility to fresh water is a basic strategy to poverty alleviation as a matter of justice.

In light of the above, it is no wonder that the target to reduce by half the proportion of people without sustainable access to safe drinking water is one of the Millennium Development Goals of the United Nations. The situation of inequity in terms of access variability to safe drinking water is reported as follows. A child born in the developed world consumes 30 to 50 times the water resources of one in the developing world. In terms of urban water infrastructure, according to a survey of 116 cities, urban areas in Africa are the worst served, with only 18 percent of households connected to sewers. The connection rate in Asia is just over 40 percent.

The confinement of the Millennium target to safe drinking water only represents a basic need approach whereby the international community is to take up a minimalist obligation to search for a solution to the water problem. The broader question remains whether the great disparities in accessibility to fresh water for a broader scope of use among people and nations is a matter of equity (justice) that requires international attention. This is a difficult question to answer as it depends on the different nature of water use, the various ways of usage and individual water-related environmental issues. Without going into the technical details of these various dimensions, one may perhaps establish that the claim to international justice arises if nationals of one country have to suffer from the disparity of accessibility as a result of negative externalities of the actions of nationals of another country. This is analog to the justice claim that polluter countries should pay not because they happen to be rich but that other countries have to suffer from the effects, e.g. global warming, of pollution.

Water, Environment and Equity (Justice)

Trends in the water problem can be double-edged. On the one hand, enhanced withdrawal of fresh water contributes to poverty alleviation, economic development, and improved well-being. On the other hand, the same activities often lead to pollution or degradation of the water resources, riv-

er desiccation, depletion of groundwater that is difficult to replace by rainfall, and damage to ecosystems and biodiversity. When these happen, the issue of intergenerational equity as well as environmental equity arises.

In this connection, a story narrated by Fred Pearce in his book⁵ is revealing. Unlike a generation ago, Indians no longer starve today. This came about thanks to a green revolution. However, the strategy thereby employed is costly. At least two thirds of the crops improved by that revolution is watered by plundering the country's groundwater. It has led to the fall of the water tables. Where water could be lifted from open wells dug to about 30 feet fifty years ago, now wells sunk to 1,300 feet may still run dry. Pearce met Chowdhury, a model farmer in northern Gujarat, who is known for his efficiency and ecological practice. Yet, he has to make his household's living by pumping from under his fields twice as much water as falls on the land in rain. Chowdhury knows very well and is worried that the water will eventually disappear. But, he told Pearce, 'What can I do? I have to live, and if I don't pump it up, my neighbors will'. Does he have no regard at all for his son's future? Well, he wants his son to get a job in the city. Does he have any regard for the future of other farmers' sons? Apparently not!

In the case of Chowdhury, we have a typical story of the tragedy of the commons.⁶ The story reveals a trade-off between poverty alleviation and environmental protection. Users of common resources such as groundwater pursue their own rational strategy of maximizing their individual benefits, thereby leading to the irreversible exhaustion or even extinction of the commons. It is an assault on intergenerational equity as the use of the commons is denied to future generations. Chowdhury thinks that his next generation has the option to exit the tragic structure. When everybody thinks likewise, the tragedy of the commons is bound to come earlier. A concern for justice in terms of the common good of generation after generation requires urgent actions at all levels.

⁵ Fred Pearce, *When the Rivers Run Dry: Water – the Defining Crisis of the Twenty-first Century*, Boston, Mass.: Beacon Press, 2006.

⁶ Garret Hardin, 'The Tragedy of the Commons', *Science*, 162 (1968), pp. 1243-8. The article examines the structure of a pasture 'open to all' from the perspective of a rational herder. He stands to directly benefit from herding his animals and suffers delayed costs from the decay of the common when he and his counterparts over-herd. The result is a tragedy. A society that believes in the freedom of the commons collapses as every herder pursuing his own best interest by increasing his cattle.

Water and International Peace

At first glance, water should breed conflicts since its availability is essential to life, production and well-being. A desire to seek control over water resources seems natural, leading to violent conflicts between riparian nations. However, the historical records prove otherwise. The UN World Water Development Report reveals that over the past 50 years, of the total of 1,831 water-related interactions between two countries, the majority, 1,228, were cooperative. They involved the signing of about 200 water sharing treaties or the construction of new dams. A total of 507 conflictive events were documented. Only 37 involved violence, of which 21 consisted of military acts – 18 between Israel and its neighbors.

According to Aaron T. Wolf *et al.*,⁷ no nation has gone to war specifically over water resources for thousands of years. The instances of cooperation between riparian nations outnumbered conflicts by more than two to one. People do compete sometimes violently for water, but water is never the single and hardly ever the major cause of conflict. On the other hand, riparian countries may cooperate even during war times. The Mekong Committee established by Cambodia, Laos, Thailand, and Viet Nam in 1957, exchanged data and information on the river basin throughout the Viet Nam War. Israel and Jordan held secret talks to manage the Jordan River since 1953, even though they were officially at war from 1948 until the 1994. The Indus River commission survived two major wars between India and Pakistan.

International Efforts to Do Justice to Water?

There are plenty of efforts at the global level to tackle water problems.⁸ Private efforts by non-governmental organizations tend to focus more on education to raise awareness and change behaviour towards more environmental friendly use of water. Inter-governmental efforts, bilateral or multi-

⁷ Aaron T. Wolf, Annika Kramer, Alexander Carius, and Geoffrey D. Dabelko, 'Water Can Be a Pathway to Peace, Not War', *Worldwatch Institute*, 2005. Downloadable from <http://www.worldwatch.org/node/79>.

⁸ At the national level, governmental efforts tend to follow three broad strategies, i.e. (1) to increase water supply by infrastructural investment, (2) to conserve water and make existing systems more efficient by technological investment and management reforms, and (3) to encourage saving and conservation by raising water price for users.

lateral, can be very concrete on the one hand, such as towards the establishment of information sharing systems. They can also be very broad, confining to advocacy of values and principles.

The most successful inter-governmental effort may be found in the cooperation among the member states of the European Union. It all started with the founding of the International Commission for the Protection of the River Rhine (ICPR) by Germany, France, Luxembourg, the Netherlands, and Switzerland in 1950. The process went through several treaties, i.e. Bern Treaty (1963), Rhine Chemical Treaty (1976), and Rhine Chloride Treaty (1976). The European Common Market joined them in 1976. Before the Single European Act came into force in 1987, the European riparian states had agreed on the first Rhine Action Plan for 1985-2000. The second Rhine Action Plan for 2001 – 2020 was adopted in the wake of the new Rhine Treaty in 1999 as a modern legal basis for closer cooperation.⁹

The second kind of international efforts is more multifarious and complicated. The UN Water Development Report gives a very succinct description of the development of international water policies from the Mar del Plata Action Plan of 1977 to the Accra Declaration on Water and Sustainable Development 2002. It suffices to summarize the key events here.

In its sixth report in 1988, the Commission on Sustainable Development mentioned equity and poverty when addressing water management. It recognizes the importance to let consideration of equitable and responsible use of water become an integral part in the formulation of strategic approaches to integrated water management at all levels, in particular addressing the problems of people living in poverty.

At the 1992 Earth Summit in Rio, water resources were mentioned as finite and vulnerable but not a particularly prominent issue. The emphasis is on the integration of sectoral water plans and programmes within the framework of national economic and social policy. The overall spirit of the approach, especially Principle 3 on 'the right to development', reflects the overriding concern of national sovereignty.

⁹ For details, see Annemiek J.M. Verhallen, J.L. Proseliske & G. Broseliske, 'Consequences of the European Union's Water Framework Directive for Information Management in its Inter-state River Basins', in Miguel A. Marino & S. P. Simonovic eds., *Integrated Water Resources Management*, Oxfordshire: International Association of Hydrological Science Publications, No. 272.

As international policy debate went on, water became firmly embedded into wider processes of sustainable development, environmental management and poverty reduction. This policy re-focusing is eminently reflected in the UN Millennium Declaration (2000):

We resolve further to have, by the year 2015, the proportion of the world's people whose income is less than one dollar a day and the proportion of people who suffer from hunger and, by the same date, to halve the proportion of people who are unable to reach or to afford safe drinking water (paragraph 19).¹⁰

In response to the *World Water Vision* launched at the World Water Forum in The Hague in 2000, The Hague Ministerial Declaration of the same year identified seven challenges for the global community. They include (1) meeting basic needs of safe and sufficient water and sanitation, (2) securing food supply including the more equitable allocation of water for food production, (3) protecting ecosystems, (4) managing risks of floods, droughts, pollution and other water-related hazards, (5) sharing water resources at all levels, 'whenever possible', (6) valuing water in a way that account for the need for equity and the basic needs of the poor, and (7) ensuring good governance.

What have transpired do not amount to any tangible results in enforcing international justice in the management and allocation of water. The achievements consist largely in breakthrough in agenda-setting, generation of research information, raising public awareness,¹¹ and development of values and principles as benchmarks for assessment.¹² These principles are not even customary international law, not to speak of having any binding

¹⁰ A full copy of the declaration can be downloaded from the website of the United Nations, <http://www.un.org/millennium/declaration/ares552e.htm>.

¹¹ A prime example is the International Year of Freshwater, 2003 proclaimed by the UN General Assembly. See Marcia Brewster, 'International Year of Freshwater, 2003: Activities, Cooperation and Lessons Learned', in John C Rodda & Lucio Ubertini, eds., *The Basis of Civilization – Water Science?*, Oxfordshire: International Association of Hydrological Science Publication, 2004, pp. 109-116.

¹² Oran R. Young summarizes into what he calls 'the ethical code of human/environment relations seven principles: that of polluter pays, environmental equity, common but differentiated responsibility, obligation to future generations, stewardship, caring for the earth, and the precautionary principle and the corollary of reverse onus. For more discussion, see his 'Environmental Ethics in International Society', in Jean-Marc Coicand & Daniel Warner eds., *Ethics and International Affairs: Extent and Limits*. Tokyo: United Nations University Press, 2001, pp. 164-173.

force on sovereign states. As a discourse on normative principles, the above efforts to integrate water resources management into wider processes do not specifically pronounce any respect for Creation at all.¹³ The priority concern is sustainable development defined in terms of human welfare. Biodiversity, ecosystems and the life of non-human species are recognized as important for, but not equal with the human kind.¹⁴

The respect for nature (though not for Creation) can be found in a different international discourse on environmental protection in general, without specific reference to water. That is the World Charter for Nature, a resolution adopted by the UN General Assembly in 1982. The preamble of the Charter recognizes our interdependence with and responsibilities to the larger community of life and the evolving universe. Its paragraph 1 proclaims that '(n)ature shall be respected and its essential processes shall not be impaired'. The concept of 'respect' in the Charter represents a remarkable jump from an environmental concern in purely utilitarian terms of human welfare to an equal right to existence for other lives on the planet.

What Are the Barriers to International Justice?

International justice is not national justice writ large, because the former has often to be mediated by sovereign governments. There is neither international law nor any universally accepted set of norms governing international political interactions, that can effectively reconcile the tension between the nation-state's claim to sovereignty and the justice-claims posed by other states or their citizens.¹⁵

¹³ This statement does not deny that individual politicians may have the respect for Creation in mind when they seek to integrate non-utilitarian environmental protection within sustainable development. Klaus Toepfer, UNEP's Executive Director, is a case in point. In an interview on the eve of the World Summit on Sustainable Development in Johannesburg in [year], he provides the following unique perspective: 'This is a very necessary component for the Summit. Sustainable development needs diversities of culture, spiritual values and biodiversity. *Without respect for the creation of God* and the values of indigenous people, you cannot arrive at a peaceful and stable world'. Quoted from: <http://www.ourplanet.com/imgversn/131/topfer.html>.

¹⁴ This idea of differentiating between the concepts of environmental protection and sustainable development is borrowed from Oran R. Young, *ibid.*, pp. 163-164.

¹⁵ For an attempt to demonstrate the possibility of ethical principles in international relations and an argument for the state as a practically necessary, though not self-sufficient or enclosed, constituency of justice, see Leo McCarthy, *Justice, the State and International Relations*, London: MacMillan, 1998.

The concept of sovereignty is by nature anthropocentric. Sovereign governments are obsessed with national interest and power. National interest is not objectively given but subjectively constructed, the mode of construction has been state-centered, rather than people-oriented or environment-informed. The obsession with state capability leads to the preference for economic growth over the preservation of nature.

Given the principle of sovereignty and the anarchic nature of the state-system, the tragedy of the common is more difficult to overcome at the global level than the national one. A national government can, if it wants to, introduce measures to steer the actions of its people so as to, for example, prevent the ground water as a common pool of resources from disappearance. On the contrary, no nation can be compelled to sign an international treaty on water conservation.

The balance sheet of international efforts to do justice to the environment is nicely presented by Chris Brown as follows.

'Global economic growth has taken place without reference to environmental consequences such as global warming, ... , and the international system has proved unable to prevent the situation from getting worse... The reason for this inability is clear: the system of sovereign states allows, even encourages, individual states to act selfishly...; the effective impossibility of sanctioning the most powerful countries – who are also the biggest polluters – means that steps to avoid catastrophe rely upon the good will of those states and their willingness to adopt an enlightened, long-term definition of their self-interest. The environmental politics of the last few years makes it clear that this cannot be relied upon'.¹⁶

Left alone, national governments will, according to Realism in international theory, act in the same rational way as Chowdhury in the above story does, i.e. 'if I do not exploit nature, my neighbors will'. To overcome this realistic, rational reasoning at the international level, one precondition must be fulfilled, i.e. the sense of a global community with shared values or principles. For a respect for Creation to emerge as a principle of international justice, senses of national communities are insufficient. Nationalism today is already too strong, not too weak. We need a sense of a single Earth community or even a Cosmo-community. It is a utopia at the moment. Sure, that we are one community has entered into speeches of national

¹⁶ *Sovereignty, Rights and Justice: International Political Theory Today*, Cambridge: Polity Press, 2002, p. 234.

leaders and international declarations. The discourse on ethical principles for such a community is emerging. Yet, these, sense of a single Earth community and ethical principles, are not yet widely shared. There is no effective mechanism to give substance to that one global community in terms of principles such as the obligation to future generations, the polluter pays, the rich nation does not insulate itself from environmental harm by pushing problems on to the poor, ect.

Water and Respect for Creation

In writing this commentary, the author has been frustrated by failure to find any mention of the respect for Creation in international political events. In comparison, there are activities in domestic and international civil society that sometimes relate environmental concerns to Creation. Here, religion plays an important role as catalyst.

Water has a central place in the practices and beliefs of Catholicism. The Church believes that through baptism in water, we are liberated from sin. Water is also God's creation. What can a catholic ethic on water bring in the respect for Creation? We need perhaps to go back to the source, Genesis in the Old Testament. There, we have two messages that can be interpreted very differently.

According to Genesis 1:28, after having created and blessed Man, male and female, God said, 'Be fruitful and multiply, fill the earth and subdue it, rule over the fish of the sea and the birds of the air, over every living creature that moves on the ground'. The idea of dominion, 'to subdue and to rule', can give rise to a wanton disregard for the nature thereby destroying the ecosystems created by God.

However, in 2:15, Genesis continues: 'Yahweh God took Man and placed him in the Garden of Eden to till it and take care of it'. This message suggests a principle of stewardship, 'to till and to take care of', that we owe to the other creatures.

Today, both the idea of dominion and that of stewardship coexist in the West. As an example of the former, we see the Wise Use movement which, though not the mainstream, has been gaining influence since the late 1980s in the United States. It is reaching new constituencies and has the sympathetic ears of the executive.¹⁷ On the contrary, an Evangelical Environmen-

¹⁷ For more information, consult "The Perversion of "Wise Use"" in the *Brooklyn Rail: Critical Perspectives on Arts, Politics and Culture*, May 2006, by Stephanie Hendricks, avail-

tal Network with a *Creation Care* magazine was founded to cherish and care for Creation.¹⁸ They submit that many environmental problems are fundamentally spiritual problems. Their Evangelical Declaration on the Care of Creation stresses on the biblical call to reduce pollution and environmental degradation and the harm they cause to people and the rest of creation. In *Jesus and the Earth*,¹⁹ James Jones, the Anglican bishop of Liverpool, admits to an ecological conversion by re-reading the Gospels to find a firm case that we have a God giving us the responsibility to care for the earth that He gave for our use. In short, my limited search of the websites for current developments in the Christian environmental movement suggests that the idea of stewardship is taking hold in the West and spreading to the East.²⁰

The above revisitation of the Old Testament in search for theological food serves to bring home the fundamental problem that underlines 'international justice' as an issue related to Creation of the Earth, including water. It boils down to the problem of attitude and spirit, whereas the problem of water crisis is superficial. Deplorable as may be physical scarcity, technological bottlenecks, mishaps in resources management, bad global governance, they can be corrected by human actions. Yet the final correction requires a sense of justice as moral approval oriented towards the environment. Such a sense of justice can only be grounded in the respect for Creation. Otherwise, we can easily fall back into the human-welfare-oriented, utilitarian trap of distributive justice when addressing global environmental problems like the water crisis.

At the behavioural level, the attitudinal and spiritual problem is ultimately a problem for each individual, although it becomes more complicated when manifested at the collective levels such as neighbourhood, city, state, and the world. Therefore, without belittling the appropriate role for sovereign governments in the intermediation of international justice, we must recognize that individuals and groups in civil society with the right attitudes and spirit can change the course of events through morally

able on <http://www.brooklynrail.org/2006/5/books/the-perversion-of-wise-use> and, for more details, David Helvar, *War Against the Greens: the 'Wise Use' movement, the New Right and Anti-environment Violence*, San Francisco, CA: Sierra Club Books, 1994.

¹⁸ For details about the Evangelical Environmental Network, consult <http://www.creationcare.org/>.

¹⁹ SPCK Publishing 2003.

²⁰ See <http://www.jeef.or.jp/ASIA/korea2/07KCEMS.html> for the Korea Church Environmental Movement Solidarity for Peace and Integrity of Creation.

approved actions. By way of conclusion, let me reproduce below a story of attitude change among engineers that has led to a more effective way of dealing with flooding. The story makes us hopeful for a sustainable Earth Community of Creation.

In Chapter 31 'Learning to Love the Floods' in *When the Rivers Run Dry*, Fred Pearce gives many concrete examples of how urban engineers have learned to restore the rivers' health and our hydrological future by respecting nature. In short, there are two ways of beating floods. The first, a fast option, is to eliminate the water quickly by building city drains, straightening rivers, constructing ever bigger and bigger dams, and the like. Yet, '(f)rom the Mississippi to the Danube, the flood-free future has failed to arrive' (p. 285). At the end, engineers in many places have turned to an alternative option, i.e. to hold on to the water. The new strategy is to go with the flow of nature such that every city should be porous and every river should have room to flood naturally. For instance, after the floods in 2000 that cost \$1.5 billion, England's Environment Agency broke banks to re-flood the ancient Thames floodplain at Otmoor, outside Oxford, and created new wetlands further downstream. Similar strategy is adopted in a housing development across Berlin. Not a drop of rain water leaves the Zehlendorf suburb. Rain from the roofs, gardens, and drives of 160 houses is collected to irrigate parkland.

For the time being, the 'love the floods' strategy remains an isolated case in a limited area of application, the challenge is whether it can gain wider acceptance and form the basis for a more general environmental ethic that is truly grounded in the respect for Creation.

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