



The World's Poor

How can rich countries best help poor ones? **Matt Ridley** identifies five priorities that provide the biggest benefits for every dollar spent.

N SEPTEMBER NEXT YEAR, the United Nations plans to choose a list of development goals for the world to meet by the year 2030. What aspirations should it set for this global campaign to improve the lot of the poor, and how should it choose them?

In answering that question, U.N. Secretary-General Ban Ki-moon and his advisers are confronted with a task that they often avoid: setting priorities. It is no good saying that we would like peace and prosperity to reach every corner of the world. And it is no good listing hundreds of targets. Money for foreign aid, though munificent, is limited. What are the things that matter most, and what would isoue but metter lose?

be nice to achieve but matter less?

The origin of this quest for global priorities goes back to 2000, when Mr. Ban's predecessor, Kofi Annan, picked a set of "Millennium Development Goals," eight challenges to be met by 2015, which were adopted by world leaders. Although some of these goals were woolly, the very brevity of the list and the deadline itself meant that they really did catch the world's imagination and force the aid industry to be more selective.

Most of the original Millennium Development Goals will have been met or nearly so by 2015. Since 2000, for example, the number of people living in extreme poverty and hunger around the world will have been cut in half—an astonishing achievement. Other goals included universal primary education, gender equality, reduc-



GOAL: Boost preprimary education, which costs little and has lifelong benefits by getting children started on learning.

To slash global poverty, we need to be more ruthlessly selective in setting new development goals.

tions in child mortality, improvements in maternal health, progress against HIV and malaria, environmental sustainability and (most vaguely) a "global partnership for development." The lesson, surely, from this first round of setting development goals is the need to be even more ruthlessly selective next time. A list of eight goals is too long for most outsiders to remember. When I asked several of my colleagues in the British Parliament, they remembered only three to five. Several development experts I spoke to say that the new list should have just five discrete, quantitative, achievable goals.

Only Mr. Ban can make that happen, says Charles Kenny, a senior fellow at the Center for Global Development in Washington, D.C., who observes that you should "never ask a committee to write poetry." Mr. Kenny told me: "There is one person who can bring the poetry. The U.N. secretary-general has to edit down with an ax, not a scalpel. Without strong intervention from Ban Ki-moon, there is extremely limited prospect for simplification."

So far, however, the process of deciding on the 2030 goals is short on poetry. There is not just one committee on the job but several—the most prominent of which is called the Open Working Group, or OWG, which has already been meeting off and on for more than two years. The OWG "stream"—and keep in mind that other U.N. groups are also producing streams of their own—has so far managed to whittle its list of possible targets down to 169. It is an absurdly long list, and each time the results of its deliberations are published, every pressure *Please turn to the next page*

Mr. Ridley is the author of "The Rational Optimist: How Prosperity Evolves" and a member of the British House of Lords.



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REVIEW



MIND & MATTER: **ROBERT M. SAPOLSKY**

Stress Hormones May Make Us **Risk-Averse**



THE NOTION that humans are Homo economicus, rational economic decision makers, has taken some serious hits ever since people bought more than 1.5 million Pet Rocks in

the 1970s. Research in behavioral economics shows that we are typically more generous in economic games than logic would predict, that we will pay to spitefully punish freeloaders and that we tend to make rapid emotional decisions—and then struggle to rationalize them. A new study adds to this theme by showing how a class of stress hormones can distort decision-making in a setting resembling the stock market.

In a splashy, much-discussed paper published in 2008 in the Proceedings of the National Academy of Science, John Coates and Joe Herbert of Cambridge University examined the levels of various hormones in male floor traders at the London stock market over the course of eight days of work. They wanted to see if hormone patterns correlated at all with how the market was doing and/or with the trader's own market performance. (Dr. Coates had spent his errant youth working as a trader at Goldman Sachs and Deutsche Bank before being born again as a neuroscientist.)

One of their key findings concerned cortisol (aka hydrocortisone, part of a class of adrenal steroid hormones known as glucocorticoids). Stress spurs cortisol secretions. If you're stressed like a normal mammal running from a predator, cortisol helps to save your life. But chronic psychological stress—a human specialty—elevates longterm cortisol levels, which increases the risks of stress-related diseases.

So when did cortisol levels rise in these traders? You might think: when they lost money. But that wasn't it. Instead, market volatility raised cortisol. This made won-

Global Aid That Really Works

Continued from the prior page

group checks to make sure its favorite goal is still in there and makes a fuss if it is not.

What Mr. Ban needs is an objective way of paring down the list. In doing so, I would recommend to him an unlikely ally: Bjorn Lomborg, a T-shirt-wearing, vegetarian, Danish political scientist who shot to fame in 2001 with a book called "The Skeptical Environmentalist," which infuriated those who support environmental protection at all costs, including the welfare of the poor.

Mr. Lomborg is the founder of an international think tank called the Copenhagen Consensus Center. He has invented a useful method for dispassionately but expertly deciding how to spend limited funds on different priorities. Every four years since 2004, he has assembled a group of leading economists to assess the best way to spend money on global development. On the most recent occasion, in 2012, the groupwhich included four Nobel laureates-debated 40 proposals for how best to spend aid money.

The goal was simple: to create a cost-benefit analysis for each policy and to rank them by their likely effectiveness. For every dollar spent, how much good would be done in the world?

The Copenhagen Consensus Center process has won world-wide respect for its scrupulously fair methods and startling conclusions. Its 2012 report, published in book form as "How to Spend \$75 Billion to Make the World a Better Place," came to the conclusion that the top five priorities should be nutritional supplements to combat malnutrition, expanded immunization for children, and redoubled efforts against malaria, intestinal worms and tuberculosis.

Their point wasn't that these are the world's biggest problems, but that these are the problems for which each dollar spent on aid generates the most benefit. Enabling a sick child to regain her health and contribute to the world economy is in the child's interest-and the world's.

The numbers produced by this exercise are eye-catching. Every dollar spent to alleviate malnutrition can do \$59 of good; on malaria, \$35;

on HIV, \$11. As for fashionable goals such as programs intended to limit global warming to less than two degrees Celsius in the foreseeable future: just 2 cents of benefit for each dollar spent.

Nor is this just about the cold tabulation of dollars and cents. The calculus used by the Copenhagen Consensus also includes such benefits as avoided deaths and sickness and potential environmental benefits, including forestalling climate change.

The Copenhagen experts use strips of paper on which are written different priorities along with cost-benefit ratios, and they are invited to move them up and down as they debate the academic evidence. In setting priorities, they also take into ac-

count the feasibility of scaling up interventions and the risk of corruption.

Of course, when the U.N. is contemplating its choices for the next set of global development goals, cost-benefit isn't the only criterion. In South Africa, for instance, HIV is a much bigger problem than malaria, so different regions will have different concerns. But ranking the interventions does concentrate the mind.

Surprising as it may seem, the global-aid industry has rarely done such cost-benefit analysis. People in this line of work generally recoil from such rankings as a heartless exercise implying discrimination against still-worthy global goals. The aid industry often seems implicitly to take the view that funds are unlimited and that spending on one priority doesn't crowd out spending on another. But this is patently not the case: The problems are far bigger than the available budget and will remain so even if the world's rich countries ever meet their 35-year-old goal of spending 0.7% of their GNP on development aid.

In December last year, Mr. Lomborg came to New York to address the U.N. Open Working Group's ambassadors directly. He handed them his strips of paper and asked them to put them down in preferred order. It was an eye-opening exercise in a place where people are accustomed to saying, in diplomatic earnest, "Everything is important." Then, over eight days in June, Mr. Lomborg got a group of 60 leading economists to work through all the OWG's putative development targets for 2030 (there were more than 200 of them at the time), making a quick assessment of which were good value for money. The result, now available online, is a document that assigns a color code to each target: green (phenomenal value for money), pale green (good), yellow (fair), gray (not enough known) and red (poor). At the conclusion of this process, the group had 27 "phenomenal" green values and 23 "poor" red values, with all the rest in between. Champions of aid aren't used to having their homework marked in this stark fashion, and some didn't like it at first. As Ambassador Elizabeth M. Cousens, the U.S. representative to the U.N. Economic and Social Council, told Mr. Lomborg, "I really don't like you putting one of my favorite targets in red." But she added, "I'm glad you're saying it, because we all need to hear economic evidence that challenges us." Having gone through this useful document myself, I found myself in

1. Reduce malnutrition. When children get better food, they develop their brains, stay in school longer and end up becoming far more productive members of society. Every dollar spent to alleviate malnutrition brings \$59 of benefits.

2. Tackle malaria and tuberculosis. These two diseases debilitate huge populations in poor countries, but they are largely preventable and curable. In the most harshly affected countries, two people often do one person's work because one of them is sick. Benefit to cost ratio: 35 to 1.

3. Boost preprimary education, which costs little and has lifelong benefits by getting children started on learning. 30 to 1.

4. Provide universal access to sexual and reproductive health, which would save the lives of mothers and infants while enabling women to be more economically productive. It would also lower birthrates (when fewer children die, people have fewer children). Benefits could be as high as 150.

5. Expand free trade. This isn't considered sexy in the development industry, and it may seem remote from humanitarian issues, but free trade often delivers phenomenal improvements to the welfare of the poor in a surprisingly short time, as the example of China has demonstrated in recent years. One of the discoveries of the Copenhagen Consensus process is that incremental goals such as expanding free trade are often better than supposedly "transformational" goals. A successful Doha Round of the World Trade Organization could deliver annual benefits of \$3 trillion for the developing world by 2020, rising to \$100 trillion by the end of the century.

The development goals of least value, according to the Copenhagen process, include the self-contradictory call for higher agricultural pro-

A dollar spent

ductivity with less environmental impact. Other bad investments are less obvious but would actually hurt the poor. For example, equal access to affordable tertiary education may sound good in principle, but in many developing countries, it amounts to a policy of having the mass of poor people pay for the college education of the rich. Other goals-such as "sustainable tourism"-are simply too narrow and ill-defined to merit consideration on a list of urgent priorities.

One much-favored goal in the list generated by the U.N.'s Open Working Group comes out especially badly: the idea of providing gender-disaggregated data to help women. Not only do we already have much of the data (and it is very costly to gather more), but

how, say the Copenhagen experts, would you define the gender-disaggregated value of a cow owned by a family of five?

Those who fear that the rankings might reflect Mr. Lomborg's own prejudices will be relieved. He convened the economists, to be sure, but they are the ones who did the color coding.

Mr. Lomborg accepts the basic conclusions of today's climate science, but he is known to be skeptical about many current policies to avert climate change. Still, the experts he brought together conclude that phasing out fossil-fuel subsidies is a "phenomenal" value. They also find excellent value in programs meant to develop resilience and adaptive capacity in response to climate-induced hazards.

But they judge it poor value, for the world's poor, to attempt either to double the share of renewable energy in the global energy mix or to hold the increase in global average temperature below a certain level in accordance with international agreements. This is because the experts think that allowing emissions to rise initially while investing in rapid advances in energy technology is a much better idea than trying to limit emissions now with today's expensive renewables.

Indeed, one of the world's most pressing health problems, and the one most conspicuously missing from Mr. Annan's original development goals in 2000, is the annual death toll of more than four million people

on malnutrition can do \$59 of good; on malaria, \$35; on HIV, \$11.

derful sense, given that the two key building blocks of psychological stress are lack of control and unpredictable situations.

In addition to its effects throughout the body, cortisol also influences cognition, emotions and behavior. This raised a critical question for the researchers: What do elevated levels of cortisol do to decisionmaking by traders?

Sustained stress causes atrophy of the frontal cortex, used in decision-making.

This is what Dr. Coates and his colleagues address in their new study, also published in the Proceedings of the National Academy of Science.

For this work, the researchers administered cortisol to volunteers. They carefully calibrated the amount so that it raised levels not through the roof but into the moderate stress range observed in the 2008 study. Subjects then played a financial risktaking game.

The result? One exposure to high cortisol did nothing, consistent with prior findings that it's typically chronic exposure to stress levels of the hormone that alters behavior. But eight days of exposure changed the subjects' behavior in the game: The volunteers now preferred low expected returns and lower-variance bets. In other words, they became more averse to risk.

This jibes with prior research. Suppose subjects have learned to respond successfully to a challenge in a certain way. Suddenly, that response stops working. Should they try a new strategy? Maybe, but in such situations, we instead often become perseverative—doing the same thing over and over, faster, more often, while crossing our fingers, while wearing our lucky underwear.

Studies have shown that stress and cortisol make humans and lab animals more perseverative in this way. Moreover, we know the discouraging biological underpinning of such findings: Sustained stress and stress-hormone exposure cause atrophy of the frontal cortex, the brain region that plays a key role in decision-making.

What does it mean that market volatility pushes stress hormone levels into a range that makes people risk-averse? Is this good or bad for the traders?

Don't ask me; I'm no economist. The main point is one that Dr. Coates also emphasizes: We're not optimizing machines but organisms with the invisible hand of biology lurking behind our every behavior.

full sympathy with those forced to choose among them. But at least this sort of analysis provides some rigor and direction.

What would my own list of five 2030 goals look like, based on the work of the Copenhagen Consensus group?

due to indoor air pollution. This enormous, abiding problem is attributable to the fact that so many of the world's poor lack access to affordable (that is, fossil-fuel-generated) electricity and therefore cook over burning wood or dung.

This most recent exercise by the Copenhagen Consensus Center was, Mr. Lomborg admits, "quick and dirty," intended to catch the attention of the Open Working Group before it wraps up its work for the summer. But in the coming months, Mr. Lomborg's group will publish thousands of peer-reviewed pages, describing costs and benefits for all the most important U.N. targets. With the help of three Nobel Laureates, the group will produce a definitive report with ranked priorities and deliver it to the U.N.

Figuring out the best way to help the world's poor isn't like solving a math problem. There are not right and wrong answers. But there are better and worse answers, and the only way to assign those priorities is to set aside our sentimental commitments and do the hard work of assessing costs and benefits.

See some of the Copenhagen Consensus Center's rankings of global development goals at WSJ.com/review.



A WOMAN has her blood pressure checked at a health center in the lvory Coast. The country has worked to reduce maternal and child mortality.