

THE CORNELL POLICY Review

ARTICLES

5 Agricultural Technology Adoption:
Issues for Consideration When Scaling-Up

Andrei Parvan, Cornell University

33 Green Power in Los Angeles:
Policies, Programs, and Context

Christopher Smith, Cornell University

57 Transparency in OLC Statutory Interpretation:
Finding a Middle Ground

Daniel Cluchey, Harvard University

COMMENT

76 Illogical Framework: The Importance of Monitoring
and Evaluation in International Development Studies

Jessica R. Pomerantz, Cornell University

88 Now Hiring: 100,000 New Farmers

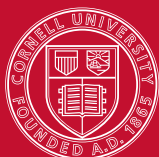
Phoebe Garfinkel, Cornell University

INTERVIEWS

100 Interview with Anna Herforth
Christopher Coghlan, Cornell University

105 A Conversation with Michael Gillenwater
Hae Seung Yi, Cornell University

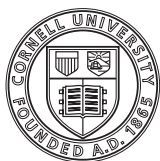
VOLUME 01
NUMBER 01
SUMMER '11



Cornell University
Cornell Institute for
Public Affairs

THE CORNELL POLICY Review

VOLUME 01 • NUMBER 01 • SUMMER '11



Cornell University
Cornell Institute for
Public Affairs

Editor-In-Chief

Sean W. Murphy

Senior Managing Editor

Perla E. Parra

Editorial Board

Michael Donovan
Marquis Hawkins
Jessica Pomerantz
Alexandra Rothenburger
Bruno Vander Velde

Associate Editors

Pratima Arapakota
Brandon Chiazza
Nicole Majestic

Article Editors

Theresa Burridge
Robert Chase
Hunter Gradie
Benjamin Hubner
Ching-Ting Wang
Fei Wu
Bo Yu

Research Editors

Miriam Edelman
Xiaoyu Du
Kyoung Hong Brian Park
Liz Yi

**Professional
Development Adviser**

Thomas J. O'Toole

Core Faculty of the Cornell Institute for Public Affairs

NORMAN UPHOFF
*Director of the Cornell Institute
for Public Affairs*

RICHARD BOOTH
*Professor of City and
Regional Planning*

NANCY BROOKS
*Visiting Associate Professor of
City and Regional Planning*

NANCY CHAU
*Associate Professor of Applied
Economics and Management*

RALPH DEAN CHRISTY
*Professor of Emerging
Markets, Director of Cornell
International Institute for Food,
Agriculture and Development*

KIERAN DONAGHY
*Professor of City and
Regional Planning*

GARY FIELDS
Professor of Labor Economics

ROBERT HARRIS, JR.
Professor of Africana Studies

NEEMA KUDVA
*Assistant Professor of City
and Regional Planning*

DANIEL P. LOUCKS
*Professor of Civil and
Environmental Engineering*

THEODORE J. LOWI
*John L. Senior Professor
of American Institutions*

KATHRYN S. MARCH
Professor of Anthropology

PER PINSTRUP-ANDERSEN
*Professor of Food, Nutrition
and Public Policy*

JEROME M. ZIEGLER
*Professor Emeritus in the
Department of Policy Analysis
and Management*

Staff of the Cornell Institute for Public Affairs

Jennifer Evangelista, *Administrative Assistant*

Lisa Jervey Lennox, *Assistant Director for External Relations*

Judy Metzgar, *Administrative Manager*

Cheryl Miller, *Administrative Assistant*

Laurie J. Miller, *Service Learning Initiative Program Coordinator*

Millie Reed, *Career Services Coordinator*

Thomas J. O'Toole, *Executive Director*

Editor's Note

We are engaged in the process of understanding and refining the concepts, ideas and goals that affect the public. To this end, I present *The Cornell Policy Review*, a place for ideas that draw policy perspectives and criticisms from the varied interests among Fellows at the Cornell Institute for Public Affairs, the broader Cornell community and other colleagues similarly engaged in this process.

In this inaugural edition of *The Review*, we are pleased to present a diverse selection of entries that reflect this commitment, featuring several former, current and future CIPA Fellows.

Andrei Parvan discusses agricultural technology adoption, with particular attention to World Food Programme policies in Ethiopia. Christopher Smith outlines the city of Los Angeles's path to renewable energy reform. Jessica Pomerantz provides editorial on the importance of quality, grounded monitoring and evaluation procedures in development aid, and Phoebe Garfinkle comments on the state of U.S. farming policies. We are also pleased to present Dan Cluchey's analysis of a growing concern over executive power emanating from the Department of Justice's Office of Legal Counsel.

Christopher Coghlan interviewed Anne Herforth, Nutrition Specialist at the World Bank, about malnourishment questions facing East African populations, while Hae Seung Yi sat down with Michael Gillenwater, director of the Greenhouse Gas Management Institute, to discuss the implications of quantitative integrity in emissions monitoring.

Over the last semesters, I have worked with two chief editors, three managing editors, and a host of associate, article and research editors. While my tenure began under *The Current*, and now concludes as *The Review*, the accomplishments of each previous staff are embedded in this new edition, and I thank all of them for their contributions. This journal would not be possible without the continued support of the CIPA staff. I have the utmost confidence that my successors, Michael Donovan and Marquis Hawkins, will continue this work of identifying decisive policy critiques.

—Sean W. Murphy, MPA/MRP 2011, Editor-in-Chief

Agricultural Technology Adoption

Issues for Consideration When Scaling-Up

Andrei Parvan

ABSTRACT

Most of the world's poor are engaged in agriculture in rural areas. Governments and development agencies promote income-generating projects as a way of encouraging growth through increased agricultural production and the protection of the natural resource base. Not all targeted communities participate in the agricultural development projects at the ideal rates and intensity, or for the proscribed length of time. This paper presents a review of agricultural technology adoption literature, specifically community characteristics that have the most significant associations with technology adoption, disadoption and non-adoption. The characteristics this paper investigates come from Feder, Just, and Zilberman's seminal World Bank study published in 1982: farm size, land tenure system, credit access, labor availability, biophysical characteristics, risk preferences, human capital, and access to commodity markets. The paper recommends policy options for governments and aid agencies to increase the likelihood that a targeted community will adopt an introduced agricultural technology. Finally, the paper focuses on how the UN World Food Programme can apply these recommendations in scaling up a degraded-land-reclamation project in Ethiopia called Managing Environmental Resources to Enable Transitions to More Sustainable Livelihoods (MERET).

ABOUT THE AUTHOR

Andrei Parvan graduated in 2010 with a Master of Public Administration from Cornell Institute for Public Affairs. His academic and career interests focus on the overlap between food policy, humanitarian policy and international development. He graduated from the University of Arizona in 2008 with a B.A. in International Studies. While at the University of Arizona he spent the 2005-2006 academic year studying English and American Literature at the Université de Fribourg in Switzerland. He has interned with the Office of Congresswoman Gabrielle Giffords in Tucson, AZ and with the UN World Food Programme in Rome, Italy, and in Addis Ababa, Ethiopia.

Introduction to Agricultural Technology Adoption Literature

The vast majority of the world’s poor lives in rural areas and is engaged in agriculture, and therefore activities designed to address the vulnerability of these rural poor are often geared toward improving agricultural practices as a means of increasing productivity, efficiency and, ultimately, income. Governments, NGOs, aid agencies and extension workers have long known that the success of any project depends, in part, on whether farmers adopt the offered technologies and, if they do, whether those farmers adopt the technologies in an ideal combination and for the proscribed length of time needed to produce designed results. Researchers have conducted decades’ worth of surveys and analyses around the world in an attempt to understand the adoption decisions of individual farmers and the diffusion patterns among communities of farmers and rural poor. By understanding how farmers and communities decide whether to adopt a technology, aid professionals can refine their agricultural technology outreach projects to address the conscious and subconscious concerns of targeted communities, and increase the probability that farmers will be willing and able to participate in project activities.

In trying to measure the process of agricultural technology adoption and diffusion, researchers most commonly use three methods to understand the factors that determine the adoption of technology across space and time: time series anal-

LIST OF ACRONYMS	
FAO	Food and Agriculture Organization
FFW	Food for Work
GoE	Government of Ethiopia
GR	Green Revolution
HDI	Human Development Index
HYV	High Yield Variety
IPM	Integrated Pest Management
LEI	Low External Input
LEISA	Low External Input Sustainable Agriculture
MERET	Managing Environmental Resources to Enable Transitions to More Sustainable Livelihoods
NGO	Non-Governmental Organization
NRM	Natural Resource Management
SA	Sustainable Agriculture
SLM	Sustainable Land Management
SRI	System of Rice Intensification
UNDP	United Nations Development Programme
WFP	World Food Programme

ysis, cross-sectional analysis, and panel data analysis.¹ Each approach involves collecting and analyzing different types of data and methods, and explains a different aspect of the adoption process. Researchers use time-series data extensively to explain how the rate of technology adoption varies with time, but time-series data does not address the fundamental reasons for adoption.^{2, 34} Cross-sectional data analyses come in two forms: “snapshot” and “recall.”⁵ The former associates farmer characteristics with likelihoods of adoption and the latter links characteristics with the time at which adoption occurred.⁶ The shortfalls of these data are the unrealistic assumptions required to make the data applicable, mainly that characteristics are consistent over time.⁷ Panel data bring together cross-sectional and time-series data and can be used to explain both adoption process and the characteristics associated with adoption.⁸ They are rarely used because they are difficult to collect and hard to manipulate. These three empirical methodologies describe the parts of agricultural technology adoption which must be understood if governments and NGOs are to craft their activities for optimum effect: what characteristics, and across what time intervals are associated with which probabilities of participation.

Technology Adoption

Technology is assumed to mean a new, scientifically derived, often complex input supplied to farmers by organizations with deep technical expertise. Neill and Lee point out that the majority of existing literature on agricultural technology adoption is focused on Green Revolution (GR) technologies such as irrigation, fertilizer use, and the adoption patterns of high-yield variety (HYV) seeds.⁹ Due to the development process of HYV and the inputs required to make them productive, studies examining HYV adoption look at very advanced forms of technology; HYV seeds are often the product of intensive laboratory research, and when they are targeted to farmers they are bundled with other technology inputs such as chemical fertilizers, pesticides and extensive irrigation because these are necessary for the HYV seeds to perform as designed. Because so many studies of agricultural technology adoption and diffusion focus on HYV and other GR inputs, their findings are concentrated on a “high-tech” definition of agricultural technology.

However, the association between most agricultural *technology* adoption literature and “high technology” inputs is incidental; it just so happens that at this point in time, most agricultural technologies being measured are scientifically advanced. This coincidence should not obstruct the point that a technology is

simply the application of scientific knowledge for a certain end. A project or a technique can still be considered a technology even if the science is many steps removed from the eventual implementer. For example, a project where extension workers encourage farmers to rotate legumes into their planting cycles is quite “low-tech,” but the chemistry behind the process of nitrogen fixation is extensive and elaborate. There are many lessons and best practices that can be gleaned from existing studies if *technology* is looked at in broader terms. Gershon and Umali define technology as “... a factor that changes the production function and regarding which there exists some uncertainty, whether perceived or objective (or both). The uncertainty diminishes over time through the acquisition of experience and information, and the production function itself may change as adopters become more efficient in the application of the technology.”¹⁰

The UN World Food Programme (WFP) developed a project called Managing Environmental Resources to Enable Transitions to More Sustainable Livelihoods (MERET)¹¹ comprised of different bundles of agricultural technologies. MERET, like other forms of sustainable agriculture (SA) and natural resource management (NRM) activities, does not have the same immediately obvious “technical” implication as GR activities, but it is an agricultural technology nonetheless. In this paper, *technology* is *any* discrete input—either as a good or as a method—with the purpose of controlling and managing animal, vegetative growth, or both. This more inclusive concept allows us to look at the adoption dynamics and diffusion patterns of an expanded MERET project using criteria established by a wide body of scholarly research and publications. The existing research is ultimately concerned with understanding the farming choices of rural communities, and there is no evidence to suggest that the decision-making process is dependent on the scientific sophistication of the input. The characteristics associated with higher rates of HYV adoption are the same as the ones associated higher participation rates in terrace construction, save for context-specific exemptions.

Just as there are different types of technologies, there are different kinds of adoption. Feder, Just and Zilberman make three distinctions in types of adoption: 1) individual vs. aggregate adoption, 2) singular vs. packets of technologies available for adoption, and 3) divisible vs. non-divisible technologies. The first option is between final adoption at the individual level, which involves an internal deliberative process but is ultimately manifested as a dichotomous decision, and the aggregate adoption behavior observed as the diffusion of a technology, and its corresponding adoption, throughout a discrete space.¹² Individual adoption can

measure the degree of use in the long run, but it is ultimately a binary observation. Aggregate adoption, on the other hand, is measured as the aggregate level of use of a particular technology among one specific group of farmers or within one particular area.¹³ These farmers, whether observed individually or collectively, can choose to adopt in different ways. In some instances, farmers are presented with a single choice: the adoption of one discrete technology such as a new HYV seed, or some other single input. But in most cases, as with MERET, agricultural technologies are introduced in bundles, and these bundles are often complementary.¹⁴ A HYV seed is introduced along with the fertilizer and corresponding land preparation practices needed to make the HYV work as designed.

Similarly with MERET, a community site may be recruited to construct dams, bunds, gully controls and terracing. They may also be taught new forms of organic and green manure application, and trained on different income-generating agriculture, including high-value fruits and vegetables and targeted animal-fat-tening programs. This gives farmers several distinct technological options, and it gives those trying to measure and model that adoption more to consider because farmers may adopt the complete package of innovation, they may adopt nothing, or they may pick subsets of bundles. Doing so produces several simultaneously occurring adoption and diffusion processes, although these processes have been shown to follow specific and predictable patterns.¹⁵

These descriptions of adoption focus on the degree of use, but some technology options are non-divisible, so their adoption either happens or does not. Variable inputs such as HYVs can be adopted in part and planted on a percentage of farmland, and fertilizer can be applied selectively, so modeling their adoption and diffusion involves first measuring if it has been adopted at all, and second assessing the extent to which farmers have adopted it. Technologies such as wells, tractors and other mechanized inputs are not divisible, thus farmers have only a discrete choice: either adopt the technology entirely or not at all. Modeling this adoption behavior at the individual level produces dichotomous outcomes, but an aggregate analysis turns these discrete choices into continuous measures of the percentage of farmers using the non-divisible inputs.¹⁶

Understanding the different kinds of possible adoption is important in understanding how traditional indicators relate to that adoption process. A study looking at MERET adoption as a binary choice would offer vastly different results than if MERET were looked at in terms of technology bundles, analyzing which

bundles are adopted in what combination by which types of farmers and communities.

Ethiopia and MERET

Ethiopia is a country so beset by poverty and vulnerability to natural and man-made shocks that it has become synonymous with famine and starvation. It is both one of the poorest countries in Africa¹⁷ and one of the most populous.¹⁸ That it consistently generates some of the lowest human development indicators in the world¹⁹ due in part to the reinforcing cycles of poverty and high population growth.²⁰ The United Nations Development Programme's (UNDP) annual ranking of countries based on development indicators places Ethiopia among the bottom 15 countries in 2007; Human Development Index (HDI) trends since 1990 have been well below those of the Sub-Saharan average.²¹ Even after decades of large humanitarian and development operations, millions of people in Ethiopia are chronically food insecure, requiring regular and repeated food transfers to meet basic caloric requirements. The United Nations Food and Agriculture Organization (FAO) and WFP report that over 7.5 million people were chronically food insecure in 2009 and another 4.9 million people were in need of emergency food assistance from January to July 2009.²² As high as these numbers are, they likely underestimate the true food insecurity problem by several millions of people.²³

Development agencies are often influenced by the misconception that chronic food insecurity results from inadequate food supply. Agencies influenced by this line of thinking have tended to favor direct transfers of food to meet immediate needs. And when the targeted communities remain food insecure in subsequent years, these aid agencies are left searching for reasons why a one-time in-kind transfer was insufficient for addressing the underlying causes of the original food insecurity. In the past few decades donors and aid professionals have come to learn that food insecurity is the result of insufficient access to food, not insufficient availability. Thus, development projects addressing long-term food insecurity have been refined to promote income generation, reduce vulnerability to shocks, increase sustainable local production and strengthen local capacity and infrastructure.

In Ethiopia this paradigm shift has manifested itself in a project called Managing Environmental Resources to Enable Transitions to More Sustainable Livelihoods (MERET), which has been implemented by WFP, along with assistance from the Government of Ethiopia (GoE) since 1980. Roughly 80 percent of Ethio-

pian households live in rural areas and are highly dependent on small-scale local agriculture to meet their food needs.²⁴ WFP finds that much of the need for direct and consistent food transfers results from low agricultural productivity and heavily degraded agricultural lands, population growth, and extremely low household incomes.²⁵ Compounding the degradation problem and confounding attempts to address chronic food insecurity is the understanding that those factors are interrelated and inter-propagating. The natural resource base is degraded from unsustainable farming practices and forest removal, these unsustainable practices being the byproducts of growing population pressures. But these population pressures were in part caused by widespread poverty, political and military conflict, and high incidences of natural shocks, especially drought-flood cycles. These forces locked the growing population out of school, out of the cities, out of non-agricultural work, and consequently forced them to stay on increasingly smaller and more heavily exploited land parcels. Responding to this income insecurity and relative unavailability of larger plots, more productive lands or non-farm opportunities, many desperate Ethiopians were forced to over-exploit their meager holdings to ensure some short-term food availability.

To break this cycle, MERET attempts to promote long-term food security by providing targeted communities with income-generating opportunities and access to more productive lands through Sustainable Land Management (SLM) practices, degraded land reclamation activities and participatory, community-based watershed development.²⁶ Due to the variation in biophysical characteristics among different MERET sites, techniques are context-appropriate and not necessarily uniform. There are, nevertheless, some shared features common to most MERET sites. They include soil and stone bunds, gully-control constructions, trenches, bench terracing, water-pond construction, organic fertilizer application, and the planting of strategically chosen tree, shrub and grass varieties.²⁷ In the past 30 years MERET has covered more than 600 sub-watershed systems, each with 300 to 2,000 participating households. The program has directly benefited over 1.3 million people.²⁸ Biophysical outcomes of MERET include:

- increased vegetative covers and increasing or rebounding biodiversity;
- reduced rates of soil loss from both cultivated and uncultivated lands, and reductions in the on- and off-site impacts of soil erosion;
- improved availability of surface and sub-surface water; and
- regulated microclimates.²⁹

The impact that MERET has had on human lives has been just as dramatic. With the rehabilitation of once unproductive lands, MERET helped poor communities create income-generating opportunities via activities such as the managed collection of foodstuffs, wood and other biomass from the newly verdant project sites. Indicators showing positive impacts on human wellbeing include:

- improved availability of, and access to, food;
- modernized housing conditions and home amenities;
- increased financial assets and investments in savings accounts, livestock and other assets;
- increased school enrollment and participation of children;
- abandonment of out-migration as a coping mechanism;
- improved quality and quantity of water;
- increased access to fuel, construction wood and grasses; and
- increased community confidence, sense of self-reliance and control over own destiny.³⁰

Communities are expected to provide the labor required for area enclosures, for bund, pond and terracing construction, and are paid for this labor with food assistance. Participants receive assistance for immediate food needs in the form of Food for Work (FFW) payments, and they also receive investment to improve future food availability through their MERET work with WFP and the GoE. Even with these dual incentives for participation, not all targeted communities choose to take part in MERET, and of those that do opt in, not all of them stay in for the entire five-to-seven years of the project cycle.

Although MERET has been active for over three decades and receives tens of millions of dollars each year, it is still a relatively small project. As the benefits of MERET become publicized WFP may decide to expand the project to other marginalized and food-insecure communities, and WFP's understanding of the technology adoption decision-process can ensure the successful implementation of MERET among these new communities. The scholarly literature is replete with studies that discuss agricultural technology adoption patterns to see which determinants have significant impacts on the adoption decision, a review of which can be used to understand MERET participation rates. Governments, aid agencies,

and development NGOs can then tailor their agriculture outreach projects to be attractive to their targeted communities.

Factors Influencing Adoption

The most often cited factors that have been used to explain the variability seen in agricultural technology adoption and its patterns of diffusion, are those described by Feder, Just and Zilberman.³¹ A range of literature measuring technology adoption, including Besley and Case,³² Zeller, Diagne and Mataya,³³ Neill and Lee,³⁴ Arellanes and Lee,³⁵ Fuglie and Kascak,³⁶ Adesina and Baidu-Forson,³⁷ and Moser and Barrett³⁸ start with the factors spelled out by Feder, Just and Zilberman. These explanatory indicators vary from study to study based on their contextual applicability, but traditionally include: 1) farm size, 2) risk exposure and capacity to bear risk, 3) human capital, 4) labor availability, 5) credit constraints, 6) tenure, and 7) access to commodity markets. In delineating these particular factors, they point out that the categories are not discrete or exclusive and that boundaries may blur and overlap due to the interdependent relationship between indicators.³⁹ For example, inadequate rural financial systems decrease the availability of affordable credit; a lack of credit increases aversion to risky undertakings such as new technology adoption; higher levels of risk aversion—or decreased ability to mitigate and bear risk—are correlated with higher levels of poverty and vulnerability to shocks; higher poverty levels are themselves associated with smaller farm sizes, lower levels of education and less allocative ability to manage change. Many studies have shown that each of these indicators significantly influences the agricultural technology adoption process; trying to separate each characteristic from the others is difficult and may even be unnecessary. The objective of adoption surveys—and of this paper—is to show how each variable affects adoption, allowing implementing actors to refine their strategies based on a wide body of empirical and qualitative results.

Farm Size

Farm size is often one of the first factors measured when modeling adoption processes. Farm size does not always have the same effect on adoption; rather the literature finds that the effects of farm size vary depending on the type of technology being introduced, and the institutional setting of the local community.⁴⁰ Fixed costs are often a primary barrier to adoption; therefore, spreading fixed costs over a larger farm may be one explanation for the observed positive association be-

tween farm size and propensity to adopt. That is not to suggest uniform causation; farm size may act as a proxy for other socio-economic indicators such as access to credit because the larger farm has more collateral value. It very well may be the case that these correlated indicators also influence the adoption decision, and therefore a failure to account for them in the regression models may tend to inflate the reported relationship between farm size and adoption likelihoods. Looking at soil conservation techniques in the Philippines, Shively finds that the decision to adopt depends on farm size, partially because soil conservation on small farms is especially costly due to increases in the short-run risk of consumption shortfall with certainty.⁴¹ The adoption of System of Rice Intensification (SRI) — a rice-growing technique for increased yields through decreased non-labor inputs — in Madagascar follows a similar pattern, with adopters allocating larger amounts of land to the practice than those farmers who adopted and later disadopted.⁴²

In analyzing the diffusion of conservation tillage practices, integrated pest management (IPM) activities and soil fertilizer testing among American farmers, Fuglie and Kascak begin with the traditional explanatory factors, including farm size.⁴³ They report that larger farms were more likely to adopt the technology bundles sooner than small farms, and that the adoption lags steadily increase for smaller farm sizes.⁴⁴ Using a cross-sectional approach with recall, the researchers were able to account for underlying dynamic influences in adoption, finding that differing rates of technology diffusion among regions persist over time.⁴⁵ And as predicted by Besley and Case, the use of recall data forced them to assume exogenous farm characteristics were constant over the period of technology diffusion, noting that “while this assumption is probably valid for natural resource characteristics, it is possible that other farm characteristics may change over time.”⁴⁶

Looking at maize-*mucuna* adoption in Honduras, Neill and Lee report that above a minimum required threshold, farm size has the expected positive association with propensity to adopt the agricultural technology.⁴⁷ Feder and Umali find that while larger farms adopt lumpy (non-divisible) and divisible technologies faster than smaller farms, the latter adopt the divisible technology more intensively, and may eventually adopt the lumpy technology.⁴⁸ This positive relationship between farm size and likelihood to adopt represents a significant problem for MERET. Because the primary targets of MERET activities are the poorest and most food-insecure communities, WFP is specifically targeting those farmers whose poverty, and consequently smaller farm sizes, indicate they are the least

able to adopt the types of agriculture technologies which aim to address the root cause of that poverty.

Risk and Uncertainty

All technology adoption decisions carry with them some mixture of subjective risk—such as human tendencies to assume more uncertainty in outcomes from unfamiliar techniques—and objective risks resulting from variations in rainfall, pests, diseases and other blights, and the timely access to critical inputs.⁴⁹ The observed patterns of technology adoption are typically influenced by the farmers' individual risk preferences and their ability to bear the risk of a new and uncertain endeavor.

Contributions to the understanding of the role played by farmer uncertainty in SA and NRM practices made by Lee are of particular significance to a survey of MERET adoption. Lee notes that unlike GR technologies, benefits from techniques employed in SA and NRM activities are more heavily skewed towards the future, while the costs are immediate.⁵⁰ This extreme delay in benefits gives a more prominent role to risk-preferences and uncertainty in the technology-adoption decision making process because for farmers to opt into a SA/NRM project like MERET, they require certain guarantees that future access to land, inputs and outputs will not be a point of uncertainty. Without some level of assurance that access to future benefits is not at risk, farmers have little incentive to invest their time, labor and capital into technology adoption. The study of SRI adoption in Madagascar shows how institutional deficiencies can exacerbate risk aversion: for the poorest and most food-insecure households, weak rural financial systems drive up the implicit interest rate on credit, making the net present value of even high future returns seem less valuable than income earned today.⁵¹ Holden and Shiferaw find that Ethiopian farm households' planning horizons are short, discount rates are high, and their willingness to invest in productivity-increasing activities is "so low as not to even partially internalize long-term land degradation externalities."⁵² Although the correlative relationship between risk-aversion and the economic measure of poverty is complicated, there is strong evidence to suggest a strong and significant relationship between low return on assets, low asset levels, the ability to diversify and manage risk, and income poverty.⁵³ This relationship between poverty and extreme risk aversion (or extreme inability to bear risk) may serve to caution against the implicit logic, which assumes that poor farmers will accept any technology that is expected to produce increased future yields. Poverty

leaves farmers vulnerable to food and income shocks, against which they have little capacity to insure; therefore even large future returns may not seem attractive if the immediate costs, and immediate risks, are sufficiently distorted. And if the farmers are from the lowest socio-economic cross-section, their lack of access to agricultural and financial resources will prevent them from being able to bear risks, even if they would otherwise prefer the riskier option. In other words, they are kept from experimenting with new techniques and technologies by the amount of risk they *are able* to take on, not by the amount of risk they *prefer* to accept.⁵⁴

Studies looking at technology adoption behaviors following shocks find that the consequences of covariate shocks affect welfare for many years after the initial impact, and in anticipation of such outcomes, poor households opt for less risky technologies to avoid permanent damage.⁵⁵ This suggests the existence of risk-induced poverty traps, where the most vulnerable are kept in low-yielding agriculture by their high sensitivity to the possible negative outcomes of risky investments. Zimmerman and Carter find that subsistence constraints and imperfect credit led to bifurcated optimal consumption strategies, with poor farmers adopting lower risk (and lower yield) crop varieties and absorbing shocks by reducing their consumption to maintain asset levels.⁵⁶ In Ethiopia, as in many developing nations, input levels have to be decided before the uncertainty over yields, climate, tenure and other indicators, has been resolved; this early commitment compounds the original aversion to adopting the high-yielding technologies which may break them out of their vulnerability-induced preference for traditional, yet insufficient, farming techniques.

Human Capital

These variables are comprised of individual or community characteristics such as education, human health indicators, age and gender demographics, and their relationship to technology adoption is one of potential. Welch breaks down human capital into worker ability and allocative ability, with the latter defined as the ability to adjust to change.⁵⁷ It is suggested that farmers with higher education possess higher allocative abilities and are able to adjust faster to farm and market conditions.⁵⁸ Looking at U.S. farmers, Fuglie and Kascak find that human capital is positively correlated with innovators or early adopters; farmers with higher levels of education adopt new technology more rapidly than farmers with only a high school diploma; and laggards are associated both with lower education and also with poor soil quality where technology does not perform well on marginal

lands.⁵⁹ In examining technology adoption among poor households in Bangladesh, Mendola finds that human capital features, such as improvements in health and education, foster the adoption of new technologies.⁶⁰

While human capital traditionally focuses on education and health indicators, Adesina and Baidu-Forson expand the category to examine farmer rationality in the technology adoption process. Surveying sorghum farmers in Burkina Faso, they note that economists investigating the adoption of new technologies often overlook how farmers' subjective perceptions of the applicability of technological outputs influence adoption decisions. In Burkina Faso the main use of sorghum is the making of *tô*, a paste derived from the grinding of sorghum, and this *tô* is the cornerstone meal for most caloric intake in Burkina Faso. Adesina and Baidu-Forson find that adoption of different sorghum varieties was based more on the applicability to grinding each variety than on output increases.⁶¹ These findings corroborate similar ones by Zinnah et al., which show that farmers' assessments of the relevance of technology is more important than contact with the technology or with extension workers in the adoption process.⁶² Thus the consideration of non-agronomic implications by farmers is another manifestation of human capital, which influences the adoption decisions and which a scale-up of MERET should take into account.

Just as risk-aversion can create a poverty cycle due to the poor's increased vulnerability to even minor shocks, negative human capital indicators, highly correlated to income, can also reinforce unsustainable agricultural practices and aversion to technology adoption. Yamauchi, Yohannes and Quisumbing find that investment in human capital development, specifically education, decreases aftershocks.⁶³ They also find that human capital accumulation prior to disasters increases resilience to the adverse effects of those shocks.⁶⁴ The prevalence of negative human capital indicators already makes the most vulnerable Ethiopians less likely to adopt capital-improving technologies, but add to that the projected effects of climate change and the situation looks even more dire. The World Bank estimates that climate change will have marked negative impacts on Ethiopia's agriculture. A one-unit increase in temperature during summer and winter would reduce the net revenue per hectare by US\$177.72 and US\$464.71 respectively, whereas the marginal impact of increased precipitation during the spring would result in net revenue increases of US\$224.09 per hectare.⁶⁵ If nothing is done to mitigate these projected effects, increased poverty and decreasing human capital indicators will push more vulnerable Ethiopians into a poverty-shock cycle and

make it more unlikely that they will adopt the types of risky agricultural technologies that can break them out of that cycle. Mendola asserts that better targeting of resource-poor producers might be the main vehicle for maximizing direct poverty-alleviating effects.⁶⁶ And it is in this capacity that MERET is designed to operate. Income generating activities and land rehabilitation schemes hold the promise of creating assets and reducing risk-aversion to the point where more farmers will adopt MERET activities, creating a cycle of growth and adoption. But to overcome the initial resistance to adoption, MERET should address the risk-preferences of the rural poor and break the current cycle of vulnerability, poverty and risk-aversion.

The average household size in MERET-targeted areas is 5.9 persons—50 percent of households have an average size of five persons and 30 percent have between seven and nine persons. The populations in these areas skew young, with 59 percent of the population under the age of 19 and almost one-third below the age of nine. Women-headed households account for a very small percentage, roughly 4.1 percent of total households. However, due to the goals of MERET and WFP, women make up a full 35 percent of project participants. Almost 90 percent of people participating in MERET activities are illiterate,⁶⁷ compared with a national average of 64 percent.⁶⁸ Because MERET is developed for areas with marginal lands and marginalized people, a study of the association between human capital indicators and MERET participation could show a negative relationship, contrary to the findings of the literature cited above.

Labor Availability

The labor market affects technology adoption differently depending on whether the area targeted with the technology has a net labor shortage or net labor surplus; seasonal availability adds another dimension. Another consideration is whether the proposed technology is labor-saving or labor-intensive. Higher labor supply is associated with higher rates of adoption of labor-intensive technologies;⁶⁹ the inverse is also true. Lee⁷⁰ sums up findings showing that household size and labor availability have been shown to influence adoption of soil conservation investments in the Philippines⁷¹ and Ethiopia.⁷² He also points out the dual nature of off-farm labor possibilities, noting that increased liquidity can allow farmers to invest in SA and NRM, but can also reduce the availability of labor and thereby decrease the likelihood of adopting high-labor technologies.⁷³ Polson and Spencer, looking at HYV adoption of cassava among subsistence farmers in Nigeria, found that family

size (and therefore labor availability) was not a significant influencer of adoption.⁷⁴ They explain this discrepancy by suggesting that subsistence farming does not experience the same types of labor shortages as income-generating agriculture.⁷⁵

Examining the diffusion of SRI among food-insecure Malagasy rice farmers, Moser and Barret report slightly more nuanced findings. Although SRI is a low external-input (LEI) technology, it does in fact require 38-54 percent more labor than traditional rice-growing methods.⁷⁶ While the returns to labor seem to significantly surpass those of traditional methods, many farmers either never participate in SRI, or opt out of the project after only a few years. A major reason for this is the timing of increased labor demand, and labor's intertwined relationship to credit constraints. The need for added labor inputs means farmers have less time to sell their labor to other farmers. While the added income from output increases would serve to offset the opportunity cost of lost labor wages in the present, farmers can only conceivably do this if they have access to credit to meet their financial obligations until the SRI crop is harvested. But weak rural financial institutions and non-existent credit means that attractive returns to SRI are less impressive to farmers because they are unable to meet immediate needs; therefore they choose not to participate in SRI, but rather to sell their excess labor to other farmers in order to earn immediate wages.⁷⁷

Credit Constraints

Access to credit is an indicator which manifests itself in other factors, such as farm size (since a farmer can borrow more money against a larger farm than a smaller farm, all other things being equal), human capital (because farmers with more education are better informed about credit practices and can even shop around for competitive interest rates), and tenure (since a sharecropper does not own land, and cannot borrow against its value). Lee notes that increased access to credit sources can help farmers surmount short-run liquidity constraints and increase technology adoption.⁷⁸

Credit considerations are of indirect concern as well because explicit and implicit interest rates determine the future value of money, and when interest rates are high, they can make modest immediate income seem more attractive than even large future returns. Rational farmers, comparing present opportunities against future income streams, can therefore be expected to exhibit sensitivity to interest rates and other credit considerations. This makes farmers from areas

with high interest rates less likely to participate in any activity in which they forgo immediate cash for any future returns. In areas where this is the case, aid agencies should include cash transfers, or payment for project participation, in order to overcome the distorted discounting caused by high interest rates. Another option is to provide financing to the communities at more reasonable interest rates, although both options risk angering local moneylenders. MERET typically uses food transfers as payment, rather than cash. This approach works for WFP because the targeted communities are significantly food-insecure; food transfers in areas with sufficient food production are not advisable as they can distort food prices, leading to lost revenue for farmers and lower production in the future.

Tenure

Tenure incorporates issues addressed in the sections on credit constraints and risk and uncertainty. As mentioned above, the uncertainty associated with a change of course is an impediment to technology adoption. It is the most vulnerable communities, those that are least able to afford a decrease in output, that are the most risk-averse. The most vulnerable communities are also more likely to have insecure tenure rights. The self-reinforcing nature of vulnerability means that those who can least afford to take on risk are the ones who are trapped in a cycle of poverty due to that risk-aversion. Poverty status is also related to land insecurity, further reducing these communities' incentives to adopt risky technology, and further promoting the risk-poverty-tenure cycle.

The history of land certification in Ethiopia is yet another explanation for the country's chronically insufficient agricultural production. Land rights in the 20th century fall into three main episodes, characterized by the form of government ruling Ethiopia at that time. Before 1975 Ethiopia was an absolute monarchy and followed a traditionally imperial landowning system. The vast majority of land was owned by a few noble and absentee landowners,⁷⁹ but worked on by peasants. Large tracts were underutilized.⁸⁰ In 1975 the imperial government was overthrown by a military coup (the Derg), which instituted a command-economy modeled after the USSR and Eastern Bloc countries. Under this order, land was confiscated from the large landowners and transferred to the State. The State then allocated parcels to families and gave them user-rights, although the State remained the ultimate owner of the land. Land could not be sold, transferred or mortgaged.⁸¹ The Derg were overturned in 1991 by the current government in Ethiopia. This government maintained the land-tenure structure instituted by the

Derg with a few alterations. It was written into the constitution that anyone wishing to farm had the right to land, and people were, for the first time, given the opportunity to rent out their land to sharecroppers.⁸²

Deininger, Ali and Alemu measured the impacts of land certification on investment and tenure security. They find that tenure security reduces the fear of land redistribution, thereby addressing uncertainty over land position.⁸³ Their findings also note that land tenure security is strongly correlated with increased likelihood to invest in soil and water conservation activities, and that it more than doubles the predicted number of hours spent on each activity.⁸⁴ Increased land security also increases the propensity to rent out land, which may lead to more efficient allocation of resources if the landowner is unable or unwilling to cultivate her plot.⁸⁵ In a different paper these same researchers find the inverse holds as well. Because sharecropper farmers will, in any given season, receive only a part of their marginal product, they have limited incentive to invest more time, labor or capital than is minimally required.⁸⁶ The results suggest that input and output intensities are significantly lower on sharecropped lands compared to owned plots.⁸⁷ Ali, Dercon and Gautam find that the share of land allocated to coffee (which is both a high input and high output crop) increases if transfer rights are present, while the expectation of land loss results in higher amounts of land allocated to low-input and low-returning crops such as *q'at* and eucalyptus.⁸⁸

While WFP can do little to influence property rights of the land tenure system in Ethiopia, it will do well to take note of the relationship between tenure and agricultural technology adoption. The response of farmers to technology adoption based on their tenure situation is yet another example of people responding to rational incentives. If farmers are not somehow ensured access to the land and its outputs, they have no incentive to invest their time, money, or both, into what they perceive as risky technology, regardless of the output increases that may occur.

Commodity Market Access

New technologies often require repeated and consistent use of new inputs such as fertilizers and pesticides. Even low external-input sustainable agriculture (LEISA) activities usually demand significant amounts of construction materials for land preparation activities. If farmers are not secure in their access to these resources and the markets that provide them, adopting the technologies that require such inputs would place them at the mercy of supply streams. Having seen that the

ability to bear risk decreases with poverty, the poorest farmers may need the greatest assurances that they will not be left without the inputs needed to sustain their families, and also earn extra income. But access to markets is needed also as an outlet for production, and not just as a means of securing inputs. Farmers need something to do with their increased output. If there are no markets that can bear the extra supply without creating a reactionary price decline, their investment in new agricultural technologies will be for naught.

Poor infrastructure in many developing nations results in inefficiencies and expensive cycles in the prices of commodities. Due to the lack of good transportation infrastructure and storage capacity, local markets are often flooded with agricultural commodities immediately following the harvest, and this drives down the unit price for each commodity. Poor storage means a large amount of output rots before it can be sold, leaving very little available for purchase in the months before the next harvest. Access to wider markets offers the possibility of increased food availability due to less spoilage and loss, higher profits for farmers because prices are not deflated due to the post-harvest flooding of local markets, and the minimization of commodity-price fluctuations. Studies often use a farmer's distance to a major road as a simple proxy for commodity market access, and they show that the likelihood of a farmer to adopt an agricultural technology decreases with distance from a road.^{89,90} Roads also imply the level of access farmers have to information. Studies suggest the likelihood that a farmer will continue using an agricultural technology is related to the frequency of contact with trained extension workers, especially for technically complex technologies,⁹¹ contact with neighboring farmers who possess knowledge of the proposed technology also increases the likelihood of adoption.⁹²

Recommendations

The first step in creating a more successful agriculture development project is to collect comprehensive data on the characteristics associated with the highest rates of adoption. Good baseline data will let the project designers know what each farmer is able to bear: how much risk they can take, how many resources they can commit, and what their constraints are. Once the implementing agency understands the positions of their targeted communities, they can build the appropriate incentives into their projects to overcome the farmers' limitations. Governments and aid professionals are next faced with a significant dilemma: it is often the farmers with the best indicators—the largest farms, the highest educa-

tion, and the closest to major roads—who are most likely to adopt a technology and benefit from increased yields. If they focus on these “poorest of the poorest” farmers, development agencies would abandon the most vulnerable communities. But with enough data, agencies will know who are the “richest of the poorest,” “average of the poorest,” and “poorest of the poorest,” and take extra steps to bridge the gaps.

Farm Size and Tenure

Farm size may be the most important characteristic to measure because it can act as a proxy for many other wealth-related variables. Some agricultural technologies need a certain amount of land in order to be successful. Watershed rehabilitation and topsoil conservation projects work best on medium- to large-scale tracts of land because of the need to stabilize the surrounding environment from wind, animal and water degradation. Farmers with the largest parcels can afford to be more experimental because for them even a relatively small percentage of their total land may be large enough to support land-intensive agricultural technologies. That makes these farmers the most likely to not only adopt these large-scale projects, but to stay in for the life of the project because their extra land, and associated wealth, means they can weather small or medium shocks that may dissuade smaller farmers.

Large farmers are also good candidates for risky or experimental agricultural technologies. Their land resources means they can devote a relatively small percentage of arable land to a new technology, while still having enough buffer land to plant their regular crops and still be assured of those economic returns. As these farmers become more familiar with the new technology, it becomes less risky, and they can assign more land to its use. Their increased familiarity will convince neighboring farmers, whose smaller plots prevented them from participating at the beginning, to take up the new technology. Development project designers should seek out large farmers for these risky and experimental technologies, give them the technical assistance to be successful and to share their results with interested neighbors. In this way, farmers become the extension workers for the very projects that can increase incomes and provide food security.

Farmers with larger farms are more likely to adopt an agricultural technology, and also more likely to remain adopters. Yet because MERET targets the poorest communities, and is often applied first to communal lands, the effects of farm

size on MERET adoption and participation are more nuanced. WFP should expect more resistance to full MERET adoption from communities allocating smaller shares of land for project activities, and it may be helpful to offer MERET activities to individual farms as well. An early focus on private land will address the negative relationship between tenure security and project participation, because offering services to private farms can convince a community to also accept operations on communal land, in which not all households feel an equal sense of ownership, or from which they may not draw as much income as other households.

Communities without secure tenure systems are less likely to participate in labor-intensive or capital-intensive projects if they are not guaranteed future access to the returns from those investments. But these communities are also often the most marginalized and vulnerable to shock-induced poverty traps. NGOs and international aid agencies can do little to influence the tenure laws in any given country, but these organizations often work in tandem with local government counterparts to implement their projects. Part of the project design can include convincing their local counterparts to take the appropriate steps to increase the legal claim to land. Another option is to make participation a pre-condition for tenure security. A farmer, or community of farmers, who lack recognized ownership of their land would put in their labor, capital, or some combination of those, into the rehabilitation and improvement of their land, and their government would “pay” them for this service with a formal deed. The farmer benefits from increased security. The government benefits from the increased production of the now-improved land, and from a community that does not rely on government assistance.

Risk Preferences and Human Capital

The adoption of a new agricultural technology carries risks and opportunity costs, and for many farmers uncertainty is a major obstacle, but measuring risk preferences is notoriously difficult, especially among poor farmers. Studies measuring the risk preferences of farmers are hardly uniform: they use different utility functions, sometimes in combination with strength of preference functions. Some studies extrapolate risk attitudes from farmers’ indifference to hypothetical lotteries while other studies infer risk attitudes from previous farmer behaviors.⁹³ Much of the variation comes from a disagreement within the agricultural economics community regarding the shape of the utility function;⁹⁴ however, most studies have one thing in common: they almost all measure the risk preferences of farmers in the developed world.

Aid professionals and development programs will certainly benefit from knowing the risk preferences of targeted communities. Aid agencies should approach the considerable lack of data on risk preferences among the rural poor as an opportunity for adding to the body of knowledge regarding decision-making under uncertainty. Aid agencies can fine-tune these approaches to gather data on poor households, incorporating risk assessments into the beginning stages of any project, and thereby learning if risk is consistent across wealth.

Risk is partly internal, but also influenced by the available resources. A person with more education is more confident in finding alternative income streams should a crop fail and is therefore more likely to participate in risky endeavors. The same principle applies to other human capital characteristics of dominance, such as gender, health, and social status. As we have seen with farm size characteristics, it is often those with the best human capital indicators that are most likely to adopt a technology and benefit from its returns. That risks shutting the most vulnerable—female-headed households, people with little or no education, the elderly, people living with HIV/AIDS, tuberculosis, malaria and other chronic diseases—out of the payoffs of new agricultural technology.

MERET tackles this issue by specifically targeting female-headed households, having mandatory female participation on project governance teams, providing extra FFW to people living with HIV/AIDS and tuberculosis, and encouraging school attendance for girls.⁹⁵ Targeting those people with the lowest human capital reserves lowers their risk aversion, increasing their likelihood of new technology adoption, which in turn increases food security, income and allows for even more improvements to human capital.

Labor, Credit and Market Access

The labor demands of a new technology must match the labor availability of the targeted community. And it follows that labor-saving techniques will be adopted in areas of labor-shortage, but not in areas of labor-surplus. Similarly labor-intensive technologies will be more popular in communities with labor-surpluses, but not in areas with labor-shortages. In many rural communities labor availability is constrained by existing planting and harvesting cycles, therefore new labor-intensive technologies should not compete with these determined timetables. SRI adoption rates in Madagascar were low because the system required increased labor inputs at the exact time when many farmers were already engaged in other

labor-intensive practices. For MERET this would imply that construction projects such as bunds, walls and fences should be scheduled either after harvest or after the sowing, and that introduction of new seeds and fertilizers be introduced during the sowing season.

Access to credit is a good way to overcome some of the financial obstacles to participation, especially in areas where interest rates are so high that they distort future income and make even large returns appear insignificant next to immediate cash. Payment for project participation, either in cash or in kind, is one method for bridging the gap between the need for immediate income and the security of increased financial returns in the future. Projects in areas of sufficient or surplus food production should opt for cash rather than in-kind payments, due to the negative market distortions that free food would cause.

Another option for bridging the credit gap is for aid organizations to provide cheap credit directly to their targeted communities. New financial institutions and project remunerations carry the risk of negative externalities, so aid agencies must carefully weigh the costs and benefits before actually giving money to poor farmers. As MERET is scaled up, WFP will be extending land rehabilitation and degraded land reclamation projects to communities less destitute than where the project currently operates. WFP should keep in mind the effects of food transfers among communities which can already afford food, and either replace FFW with vouchers or cash, or eliminate payments altogether if credit constraints are not a significant obstacle for farmer participation.

Agricultural development is about income generation. In the developing world this means increased production that does not compromise the future productivity of the natural resource base. Many poor communities lack not only access to the means of increased production, they also lack outlets for that increased production. Without external markets able to absorb increased production, excess crops flood the local market and drive down prices. While this is good for consumers, it is bad for producers and acts as a disincentive to produce more in the future, and this in turn acts as a stop against income generation.

Neill and Lee,⁹⁶ among many, show that proximity to a road is highly correlated with likelihood to adopt a new technology because a road provides farmers with access to the inputs needed to make the technology work, such as fertilizer or pesticides, as well as access to a bigger village or city where they can sell their increased yields. Aid agencies need to provide assurances that farmers will have

access to the required inputs should they participate in a new technology, as well as a ready market for their goods. This latter assurance can take the form of a loan to a cooperative of farmers that they can use to buy a truck and ship their crop to larger cities. This would provide both a route to commodity markets and diversify the local economy and create new jobs. ►

(E n d n o t e s)

- 1 Timothy Besley and Anne Case, "Modeling Technology Adoption in Developing Countries," in *New Developments in Development*, (Vol. 83, No. 2, May 1993), pg 396-402.
- 2 Ibid. pg 396.
- 3 Ibid. pg 396.
- 4 Ibid. pg 396.
- 5 Ibid. pg 397.
- 6 Ibid. pg 397.
- 7 Ibid. pg 397.
- 8 Ibid. pg 397-398.
- 9 Sean Neill and David R. Lee, "Explaining the Adoption and Disadoption of Sustainable Agriculture: The Case of Cover Crops in Northern Honduras," in *Economic Development and Cultural Change*, (Iss. 49, 2001), pg 793-820.
- 10 Gershon Feder and Dina L. Umali, "The Adoption of Agricultural Innovations: A Review," in *Technological Forecasting and Social Change*, (Iss. 43, 1993), pg 215-239.
- 11 The reader may be excused if they interpret the vocabulary gymnastics of the MERET acronym as a typical embodiment of the UN's design-by-committee approach, but also should take comfort in knowing that *meret* is also the Amharic word for "land."
- 12 Gershon Feder, Richard E. Just and David Zilberman, *Adoption of Agricultural Innovation in Developing Countries: A Survey*, (World Bank: Staff Working Papers No. 542, 1982), pg 3.
- 13 Ibid. pg 3.
- 14 Ibid. pg 3,4.
- 15 Charles K. Mann, "Packets of Practices: A Step at a Time with Clusters," in *Studies in Development*, (Iss. 21, Autumn 1978), pg 73-81. quoted in Gershon Feder, Richard E. Just and David Zilberman, *Adoption of Agricultural Innovation in Developing Countries: A Survey*.
- 16 Feder, Just and Zilberman, pg 4.
- 17 GDP per capita estimate for Ethiopia (2009) is US\$900, placing it 213th out of 227 countries surveyed. Source: CIA World Factbook, <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2004rank.html>.

- 18 The World Bank estimates Ethiopia's population (2009) at 82.8 million, placing it third behind Nigeria (154.7 million) and Egypt (83.0 million). Source: The World Bank, World Bank Development Indicators, <http://data.worldbank.org/country/ethiopia>.
- 19 United Nations Development Program: Human Development Report 2009, http://hdrstats.undp.org/en/countries/country_fact_sheets/cty_fs_ETH.html, 22 April 2010.
- 20 Ethiopia has averaged 3 percent population growth from 1970-2009; in that span the population almost tripled, from 28.9 million to 82.8 million. Source: The World Bank, World Bank Development Indicators, <http://data.worldbank.org/country/ethiopia>.
- 21 United Nations Development Program: Human Development Report 2009.
- 22 FAO/WFP "Crop and Food Security Assessment Mission to Ethiopia," (July 2009).
- 23 The author's experience with beneficiary and needs estimation is that political pressure from the federal Ethiopian government routinely revises down the WFP/FAO estimates beneficiary needs by several million.
- 24 WFP "Mid-Term Evaluation of the Ethiopia Country Program 10430.0, (2007-2011), 22 September 2009, pg 1.
- 25 Ibid. pg 1.
- 26 Woldeamlak Bewket, *Community-based rehabilitation of degraded lands: an effective response to climate change in Ethiopia*, (WFP Research Paper, November 2009), pg iv.
- 27 *Report on the Cost-Benefit Analysis and Impact Evaluation of Soil and Water Conservation and Forestry Measures*, (World Food Programme Report, 2005), pg 14.
- 28 Ibid. pg v.
- 29 Ibid. pg v.
- 30 Ibid. pg v.
- 31 Feder, Just and Zilberman, *Adoption of Agricultural Innovation in Developing Countries: A Survey*, (1982).
- 32 Besley and Case, pg 1.
- 33 Manfred Zeller, Aliou Diagne and Charles Mataya, *Market Access by Smallholder Farmers in Malawi: Implications for Technology Adoption, Agricultural Productivity, and Crop Income*, (International Food Policy Research Institute: FCND Discussion Paper No. 35, September 1997).
- 34 Neill and Lee, "Explaining the Adoption and Disadoption of Sustainable Agriculture: The Case of Cover Crops in Northern Honduras."
- 35 Peter Arellanes and David R. Lee, "The Determinants of Adoption of Sustainable Agriculture Technologies: Evidence from the Hillsides of Honduras," (Paper presented at XXV Conference of International Association of Agricultural Economists; August 2003; Durban, South Africa).
- 36 Keith O. Fuglie and Catherine A. Kascak, "Adoption and Diffusion of Natural-Resource-Conserving Agricultural Technology," in *Review of Agricultural Economics*, (Vol. 23, No. 2, Autumn— Winter 2001) pg 386-403.

- 37 Akinwuni A. Adesina and Jojo Baidu-Forson, "Farmers' perceptions and adoption of new agricultural technology: evidence from analysis in Burkina Faso and Guinea, West Africa," in *Agricultural Economics*, (Iss. 13, 1995) pg 1-9.
- 38 Christine M. Moser and Christopher B. Barrett, "The Disappointing Adoption Dynamics of a Yield-Increasing, Low External-Input Technology: the Case of SRI in Madagascar," in *Agricultural Systems*, (Vol. 76, 2003), pg 1085-1100.
- 39 Feder, Just and Zilberman, pg i.
- 40 Ibid. pg 25.
- 41 Gerald E. Shively, "Poverty, Consumption Risk, and Soil Conservation," in *Journal of Development Economics*, (Vol. 65, Iss. 2, August 2001), pg 267-290.
- 42 Moser and Barrett, pg 1092.
- 43 Fuglie and Kascak, pg 386.
- 44 Ibid. pg 397.
- 45 Ibid. pg 401.
- 46 Ibid. pg 392.
- 47 Neill and Lee, pg 809.
- 48 Feder and Umali, pg 217.
- 49 Feder, Just and Zilberman, pg 29.
- 50 David R. Lee, "Agricultural Sustainability and Technology Adoptions: Issues and Policies for Developing Countries," in *American Journal of Agricultural Economics*, (Iss. 87, November 5, 2005), pg 1325-1334.
- 51 Moser and Barrett, pg 1086.
- 52 S.T. Holden and B. Shiferaw, "Poverty and Land Degradation: Peasants' Willingness to Pay to Sustain Land Productivity," in *Natural Resource Management in African Agriculture: Understanding and Improving Current Practices*, (New York: CABI Publishing 2002), pg 91-101.
- 53 Paul Mosley and Arjan Verschoor, "Risk Attitudes and the 'Vicious Circle of Poverty,'" in *The European Journal of Development Research*, (Vol. 17, No. 1, March 2005), pg 59-88.
- 54 Mosley and Verschoor, pg 83.
- 55 Stefan Dercon and Luc Christiaensen, *Consumption Risk, Technology Adoption and Poverty Traps: Evidence from Ethiopia*, (World Bank: Policy Research Working Paper 4257, June 2007), pg 1.
- 56 Frederick J. Zimmerman and Michael R. Carter, "Asset Smoothing, Consumption Smoothing and the Reproduction of Inequality Under Risk and Subsistence Constraints," in *Journal of Development Economics*, (Iss. 71, No. 2, 2003), pg 233-260.
- 57 Finis Welch, "Education in Production," in *The Journal of Political Economy*, (Vol. 78, No. 1, Jan-Feb 1970), pg 35-59.
- 58 Feder, Just and Zilberman, pg 32.

- 59 Fuglie and Kascak, pg 386-387.
- 60 Mariapia Mendola, "Agricultural technology adoption and poverty reduction: a propensity-score matching analysis for rural Bangladesh," in *Food Policy*, (Vol. 32, 2007), pg 372-393.
- 61 Adesina and Baidu-Forson, pg 2, 5.
- 62 M.M. Zinnah, J. Lin Compton and A.A. Adesina, "Research-Extension-Farmer Linkages within the Context of the Generation, Transfer and Adoption of Improved Mangrove Swamp Rice Technology in West Africa," in *Quarterly Journal of International Agriculture*, (Iss. 32, No. 2, 1993), pg 201-211.
- 63 Futoshi Yamauchi, Yisehac Yohannes and Agnes Quisumbing, *Natural Disasters, Self-Insurance and Human Capital Investment: Evidence from Bangladesh, Ethiopia and Malawi*, (World Bank: Policy Research Paper 4910, April 2009), pg 2.
- 64 Ibid. pg 4.
- 65 Temesgen Tadesse Deressa, *Measuring the Economic Impact of Climate Change on Ethiopian Agriculture: Ricardian Approach*, (World Bank: Policy Research Working Paper 4342, September 2007), pg 3.
- 66 Mendola, pg 391.
- 67 *Report on the Cost-Benefit Analysis and Impact Evaluation of Soil and Water Conservation and Forestry Measures*, (World Food Programme Report, 2005), pg 11.
- 68 United Nations Educational, Scientific and Cultural Organization (UNESCO) and UNESCO/UIS (UNESCO Institute of Statistics), quoted in UNICEF Statistics, http://www.unicef.org/infobycountry/ethiopia_statistics.html, 09 May 2010.
- 69 Feder, Just and Zilberman, pg 33.
- 70 Lee, pg 1328.
- 71 Shively, pg 284.
- 72 Bekele Shiferaw and Stein T. Holden, "Resource Degradation and Adoption of Land Conserving Technologies in the Ethiopian Highlands: A Case Study in Andit Tid, North Shewa," in *Agricultural Economics: the Journal of the International Association of Agricultural Economists*, (Iss. 18, No. 3, 1998) pg 296.
- 73 Neill and Lee.
- 74 Rudolph A. Polson and Dunstan S. C. Spencer, "The Technology Adoption Process in Subsistence Agriculture: The Case of Cassava in Southwestern Nigeria," in *Agricultural Systems* (Iss. 36, 1991), 65-78.
- 75 Ibid. pg 77.
- 76 Moser and Barrett, pg 1089.
- 77 Ibid. pg 1096.
- 78 Ibid. pg 1096.
- 79 Daniel Ayalew Ali, Stefan Dercon and Madhur Gautam, *Property Rights in a Very Poor Country: Tenure Security and Investment in Ethiopia*, (World Bank: Policy Research Working Paper 4363, September 2007), pg 3.

- 80 Klaus Deininger, Daniel Ayalew Ali and Tekie Alemu, *Assessing the Functioning of Land Rental Markets in Ethiopia*, (World Bank: Policy Research Working Paper 4442, December 2007), pg 4.
- 81 Ali, Dercon and Gautam, pg 4.
- 82 Ibid. pg 4.
- 83 Klaus Deininger, Daniel Ayalew Ali and Tekie Alemu, *Impacts of Land Certification on Tenure Security, Investment, and Land Markets: Evidence from Ethiopia*, (World Bank: Policy Research Working Paper 4764, October 2008), pg 13.
- 84 Ibid. pg 14.
- 85 Ibid. pg 15.
- 86 Deininger, Ali and Alemu, *Assessing the Functioning of Land Rental Markets in Ethiopia*, pg 2.
- 87 Ibid. pg 3.
- 88 Ali, Dercon and Gautam, pg 24.
- 89 Neill and Lee, pg 817.
- 90 Lee, pg 1327.
- 91 Moser and Barret, pg 1091.
- 92 Guerin and Guerin, pg 563.
- 93 Joost M.E. Pennings and Philip Garcia, "Measuring Producers' Risk Preferences: A Global Risk-Attitude Construct," in *American Journal of Agricultural Economics*, (Vol. 83, No. 4, Nov. 2001) 993-1009.
- 94 One of the most popular current theories challenging the standard theory of Expected Utility is Prospect Theory. For further reading, see: Daniel Kahneman and Amos Tversky, "Prospect Theory: an Analysis of Decision Under Risk," in *The Econometric Society*, (Vol. 47, No. 2, March 1979) 263-291, Shlomo Benartzi and Richard Thaler, "Myopic Loss Aversion and the Equity Premium Puzzle," in *The Quarterly Journal of Economics*, (Vol. 110, No. 1, Feb. 1995), 73-92, Matthew Rabin, "Inference by Believers in the Law of Small Numbers," in *Quarterly Journal of Economics*, (Vol. 117, Iss. 3, Aug. 2002) 775-816, and Amos Tversky and Daniel Kahneman, "Belief in the Law of Small Numbers," in *Psychological Bulletin*, (Vol. 76, No. 2, Aug. 1971) 105-110.
- 95 *Report on the Cost-Benefit Analysis and Impact Evaluation of Soil and Water Conservation and Forestry Measures*.
- 96 Neill and Lee, "Explaining the Adoption and Disadoption of Sustainable Agriculture: The Case of Cover Crops in Northern Honduras."

Green Power in Los Angeles

Policies, Programs, and Context

Christopher Smith

ABSTRACT

How did the City of Los Angeles convert its electric power generation fuel mix from 3 percent renewable to 20 percent in less than a decade? Disappointing and controversial performance from an early green pricing program led policymakers to shift their policy approach away from commercial sales of renewable power to normative environmental public good provision. Aided by pressure from regulatory changes at the state level and growing support for renewable energy from political leaders and the public, this policy shift enabled The Los Angeles Department of Water and Power to make dramatic gains in the last several years.

ABOUT THE AUTHOR

Christopher Smith graduated from Cornell University's Department of City and Regional Planning with a Master of Regional Planning in the spring of 2011. In 2010 he was selected as a Sustainable Energy Fellow and had the opportunity to attend an annual national conference on sustainable energy. Prior to Cornell, Christopher worked as a Political Analyst at the American Association for Justice. He completed his undergraduate studies at the Massachusetts Institute of Technology. He is from Alexandria, Virginia. In the fall of 2011, Christopher plans to join the Cornell Institute for Public Affairs to pursue a Master of Public Administration.

On January 13, 2011, Los Angeles Mayor Antonio Villaraigosa proclaimed at a City Hall press conference that the Los Angeles Department of Water and Power (DWP), the city-owned water and electric power utility, had achieved an important milestone. The DWP had generated 20% of the electricity it sold to its customers in 2010 from renewable energy sources. The DWP, the nation's largest municipally-owned electric utility, achieved a renewable energy goal that no other public or private utilities had met during a time when a tumultuous political milieu posed unique challenges. Moreover, the DWP had been generating only 3% of its power from renewables as late as 2003 before dramatically converting from 3% to 20% by the January declaration. How did the City of Los Angeles achieve its renewable portfolio standard goal of 20% by 2010? This paper will trace that path.

The Los Angeles experience is important for two related reasons. First, it is an example of the public sector steering a transition in an important, socially-embedded technological system. Second, as cities like Los Angeles and other jurisdictions mobilize to combat global climate change, much of their task to reduce carbon emissions will involve reforming how the hard technical infrastructure of the built environment uses and produces energy. Los Angeles's successful energy transition supports the argument for public sector institutions to assert a greater role in managing sustainable change.

The renewable energy transition in Los Angeles was the result of a normative renewable energy policy comprised of public sector decisions, policies, programs, and politics implemented at three different levels of government: city, municipal, and state. Gradually, activity between the levels became more coordinated and intensified with strong political direction from the Mayor of Los Angeles, such that the outcomes from this multi-level renewable energy policy implementation became far greater than anticipated.

In the section "*Mandating Green Power*" I argue that several landmark State of California legislative acts starting from the 1990s created a regulatory context that forced renewable energy into a higher place on Los Angeles's policy agenda. These legislative acts also motivated local energy policymakers to pursue renewable energy development in Los Angeles with successively greater ambition.

The sections "*Selling Green Power*" and "*Acquiring Green Power*" analyze how

Los Angeles, through the operational scale programs of the DWP, responded to state government-level policy stimuli, by employing two frameworks for its renewable energy policies and programs. The first framework was commercial. The commercial framework regarded renewable energy as a private commodity being sold to customers. Under this framework, the recipients of renewable energy are those with the means to purchase renewable power. The DWP operates under this framework as a merchant, only investing in renewable power generation in response to expressed customer demand. The second framework is normative and environmental. It regards renewable energy as a public good which should be distributed to all on an equitable basis. The DWP is not a merchant under this framework but a provider and guarantor. The DWP's shift from commercial renewable energy policy to normative environmental renewable energy policy led it to strengthen its focus on acquiring renewable power through both purchasing agreements and investments in generation projects. This shift corresponds with significant increases in the renewable energy portion of the DWP fuel mix.

The section "*Green Power Politic*" shows that the decisions and actions of major political leaders and coalition groups shaped the policies and programs the DWP used to manage its renewable energy operations and influenced their success. In Los Angeles, the city's mayor has a disproportionate influence on policy formulation, policy decision-making, and policy implementation at the DWP, yet remains dependent on the support of politically influential coalition groups *and* opposed by other political actors embedded within various coalitions with different agendas. In Los Angeles, current Mayor Antonio Villaraigosa has presented exemplar leadership on renewable energy and has created a distinct political context in which renewable energy policies and programs have thrived.

The final section, "*Green Power Lessons*" identifies several key takeaways from the Los Angeles renewable energy transition experience. The recent experience in Los Angeles suggests that public sector institutions can be uniquely effective in leading renewable energy transitions. However, to maximize these institutions' effectiveness, there must be a regulatory and policy framework that assigns renewable energy as a high priority on their institutional agendas. This treats renewable energy as a public good and mandates the mobilization of public resources in its provision, assisted by strong support from political leaders and interest group coalitions.

Mandating Green Power

The State of California's energy and environmental laws and regulations have greatly shaped similar policies and programs in Los Angeles. A series of major California electricity policy and environmental regulation reforms intended to enhance renewable energy development also shaped the local renewable energy policy in Los Angeles.

In 1996, California passed Assembly Bill 1890 (AB 1890), a landmark piece of legislation, in an attempt to create greater choice and lower per unit prices for electricity consumers. The deregulation of California's electricity markets forced local electric utilities to adjust to greater market competition and to find new models of commercial viability. A key provision of the law eliminated legal protection for utilities' geographic monopolies, allowing electric utilities, independent power producers, and energy companies to compete for customers everywhere in the state for the first time. This state law allowed electricity consumers to choose from a greater number of possible electricity providers than ever before.

The tepid performance of the state's renewable power industry during the 2000-2001 Electricity Crisis coupled with environmental concerns motivated state policymakers to push for legislation compelling systemic reform of how the industry dealt with renewables. In 2002, then-Governor Gray Davis signed into law California's first renewable portfolio standard legislation, which committed the state's investor-owned utilities to produce 20% of their electricity from renewable sources by 2017.¹ The significance of the renewable portfolio standard, which only issued hard requirements for investor-owned utilities, was that it challenged the established orthodoxy to define renewable power as a niche product, the production of which would be determined by discernable market demand. The 2002 Renewable Portfolio Standard insisted that energy, particularly renewable energy, be treated as a "common good" rather than as a commodity.²

Governor Arnold Schwarzenegger and the California Legislature dramatically punctuated this philosophical shift with the enactment of a set of bills in 2006, most notably Assembly Bill 32 (AB 32), "*The Global Warming Solutions Act of 2006*" AB 32 was comprehensive environmental legislation designed to address the state's responsibilities in abating global climate change. The Act specifically made both investor-owned and municipally-owned electric utilities subject to future obligations for greenhouse gas emissions reductions. The legislature enacted

Senate Bill 107 that year, which modified the 2002 Renewable Portfolio Standard to move its deadline of generating 20% of the state's electricity by renewable fuels from 2017 to 2010.³ California also passed a law, Senate Bill 1368, that forbade electric utilities, public and private, from signing power purchasing contracts lasting five years or longer unless the electricity was produced in compliance with greenhouse gas emissions standards.⁴ The unstated, but direct consequence of the design of this law was that electric utilities could only buy electricity at least as "clean" as that generated from natural gas plants, effectively banning future contractual purchases from coal-fired power generators.⁵ For an electric utility like the DWP, which began the decade drawing 49% of its electricity from coal power plants, the 2006 laws were a reminder that transition was mandatory. There would be no going back.⁶

Selling Green Power

Los Angeles's transition to renewable energy began with a commercial renewable energy policy adopted in response to changes in state electric utility regulations. Los Angeles energy policymakers believed that in the aftermath of California's 1996 electric utility deregulation law, competitor utilities and power producers would exploit the niche demand for environmentally-conscious products to gain a foothold in the Los Angeles market. They decided to crowd out competition by selling renewable electricity as a boutique product to customers.

In May 1999 the Los Angeles Department of Water and Power (DWP) started offering customers the option of purchasing power generated from renewable energy sources.⁷ The DWP acknowledged that green power would cost more but also argued that the additional cost was modest (\$3 additional for every \$50 of billing for residential ratepayers; \$6 per \$50 billing for commercial ratepayers).⁸ It also offered customers two high-efficiency light bulbs for free. Called "Green Power for a Green L.A.", the program's earliest participants included then-Mayor Richard Riordan, the Los Angeles Dodgers, and the University of Southern California.⁹

As a "green pricing" program, "*Green Power for a Green*" had ample company. Green pricing programs provide a way for electricity ratepayers to pay a premium rate in addition to their standard bill to support their utility's efforts to develop renewable energy resources. Not being a wholesale substitute for concerted renewable energy development programs, green pricing programs serve as a training phase that allow utilities to make their initial entry into developing green power

generation assets. These programs also serve an education function by giving customers information about competitive electric retail choice and the overall environmental impact of electricity generation.¹⁰ Many energy companies entered the alternative energy sector in anticipation of a rising public consciousness of the environmental externalities caused by electric power generation and a growing consumer demand for electricity not produced from dirty fossil fuels.¹¹

Energy companies' anticipation of a rising market for "green" power among ratepayers was well-placed. A 1996 poll by the California League of Conservation Voters indicated that 30% of California ratepayers were willing to pay higher rates in exchange for cleaner energy.¹² In conjunction with the official start of deregulated electricity markets and a new law requiring that electric utilities provide their customers with information about the energy sources from which utilities generated their power.¹³ Major investor-owned utilities in California, such as Southern California Edison and Pacific Gas and Electric, launched green pricing programs in late 1997 and early 1998. Publicly-owned utilities were similarly compelled, though traditionally concerned with keeping electricity rates as low as possible, they felt threatened by the deregulation of California's electricity markets and they received political pressure from influential environmental groups to generate power from cleaner energy sources.

The *Green Power for a Green LA* program's commercial approach achieved early success. By November, 2000, the program had by far the largest number of customer participants of any green pricing program in the nation, and the highest number of new megawatts (25 MW) generated from renewable sources.¹⁴ In keeping with a commercial approach, DWP formed a number of partnerships to expand its green power customer base. In October 1999, the Los Angeles Board of Airport Commissioners agreed to a ten-year deal to have two Los Angeles area airports, Los Angeles International (LAX) and the Van Nuys Airport, purchase green power from the DWP at a reduced rate.¹⁵ In early 2003, Kinko's, The national office supply chain, announced that nineteen branches in the DWP service area would participate in the green power program by purchasing between 10 and 20% of their electricity in the form of renewable power.¹⁶

The DWP even struck a deal with the city itself. In 2001, the Los Angeles City Council approved a program to have 10% of the electricity the city uses for municipal operations come from renewable sources.¹⁷ The DWP received national and international recognition for its efforts. The *Financial Times* honored the

DWP the same year as the “Renewable Company of the Year” for the “high level of diversification in its energy portfolio, offering customers a solid choice within the renewable energy space.”¹⁸

However, the *Green Power for a Green LA* program’s early success was hollow. The program’s impressive participation numbers were the result of the DWP using a different standard for participation than other utilities with green pricing programs. Further, the program’s decline in rank from 1st in 2000 to 3rd in 2001 in the category of “*New Renewable Resources Supported Through Green Pricing*—the amount in megawatts of new renewable power generation paid for through green pricing receipts—indicated that the DWP was not earning revenue from the program commensurate with its participation levels.

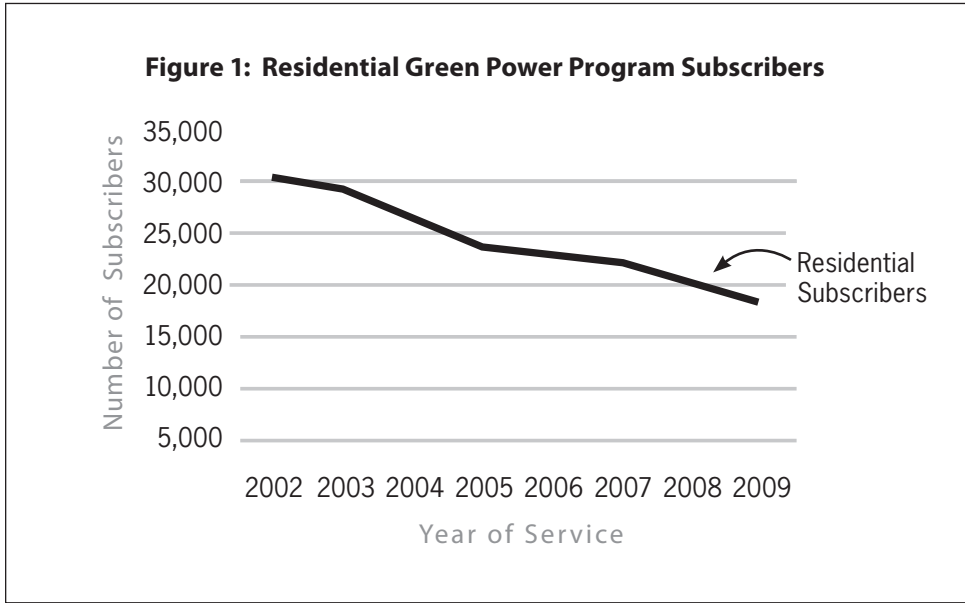
To make matters worse, the DWP failed to find its way effectively into a reinvestment in new renewable power generation capacity. A 2003 review of the DWP programs by the Los Angeles City Council’s Chief Legislative Analyst reported “DWP’s renewable energy investments account for approximately 1% of the utility’s 7,200 MW of total available capacity.”¹⁹ Even including older small-scale hydroelectric facilities, the DWP’s renewable power generation had only marginally increased even 5 years after the debut of *Green Power for a Green LA*²⁰ This is in part a function of the commercial philosophy that then guided city renewable energy policy.

This conclusion is further supported by the fact that despite its high nominal number of customer participants, the DWP’s 3 cents/kWh price placed it outside the Department of Energy’s ranking of the ten utilities with the lowest green power prices, and that green premiums have fallen over the course of the decade throughout the nation while the 3 cents/kWh rate for participation in *Green Power for a Green L* has remained constant.²¹ For other utilities’ green pricing programs, prices fell as they invested in green generating capacity and their customer participation levels rose. By 2003, *Green Power for a Green LA* had stalled as an engine for the transformation of Los Angeles’s electric power generation, and had now become a stable if unremarkable profit center for the DWP.

A public investigation into the *Green Power for a Green LA* program further revealed that its assumed progress in customer recruitment and renewable energy development was an illusion. The capable reputation of the program first unraveled when City Controller Laura Chick began investigating the program in March

2002. Chick’s investigation into the program revealed controversial spending practices by the DWP, including sponsorship of a promotional party for the green power program to the tune of \$27,000 and multi-million dollar contracts with local advertising agencies to promote green power usage and subscribership. Failure to produce significant amounts of renewable energy made this increasingly questionable. Chick noted that a program to generate electricity from landfill gas had not produced any electricity in a year of operation, only seven of twenty-seven electric buses purchased for the city three years prior were actually in service, and the DWP had only distributed twenty percent of \$370,000 for energy-efficient refrigerators.²²

Chick publicly challenged the DWP’s green marketing program for its excess, explaining that “there is no real competition” with the DWP and therefore less of a need to promote green power products and services. Chick’s “no competition” argument against the necessity of public relations services for the DWP’s green power program is evidence of the perspective of policymakers and regulators on the DWP’s green power initiatives and Los Angeles’s renewable energy policy. Policymakers and regulators outside of the renewable policy arena, like Chick, regarded green power as an energy product designed only to generate greater revenues for the DWP rather than as the tip of a larger, transformative environmental program.



Source: Los Angeles Department of Water and Power, Annual Green Power Reports

Although Chick would later observe that the DWP had “gotten their act together,” by 2004, it was clear that on commercial grounds the *Green Power for a Green LA* program had stalled.²³ At the peak of the program, it had approximately 100,000 customers participating. By 2009, the number of clean power customers had fallen to 18,300, or less than 2% of the DWP’s customer base.²⁴ Most importantly, the renewable energy content of the DWP’s power generation mix increased only an approximate 3% to 5% during the program’s first five and most relevant years.

Acquiring Green Power

The *Green Power for a Green LA* program faded into lingering controversy and stagnation. Los Angeles policymakers responded by changing the previous commercial approach to renewable energy to a normative and environmental approach that treated renewable power as a public good. This new normative environmental approach meant that the DWP figuratively stopped selling green power and focused its programs on acquiring and integrating new renewable power generation capacity for equal distribution to all ratepayers.

The DWP pursued acquisition in two forms. It struck power purchasing deals with other regional utilities and independent power producers. It also invested in green power generation projects to create and enhance its own internal capacity to produce electricity from renewable sources. The DWP’s acquisition strategies succeeded in growing the renewable portion of its power generation mix.

The DWP began acquiring renewable power assets during its commercial policy phase. Early green power purchasing deals allowed the DWP to meet the needs of green power program participants but they were not concerted in an effort to reach power portfolio goals. By the time the *Green Power for a Green LA* program was launched, environmentally conscious power consumers (or those in search of green branding) in Los Angeles were already seeking out renewable power providers. For example, in 1999, three Los Angeles-based Lucky Brand Jeans stores contracted for its renewable electricity with clean energy provider Commonwealth Energy, which claimed 50,000 renewable energy customers.²⁵ Shortly after launching its green pricing program, the DWP struck deals to expand its renewable power assets to meet expected green power demand. In early 2000, the DWP successfully negotiated an agreement with the municipally-owned electric utility Seattle City Light in which the DWP would sell green power in the

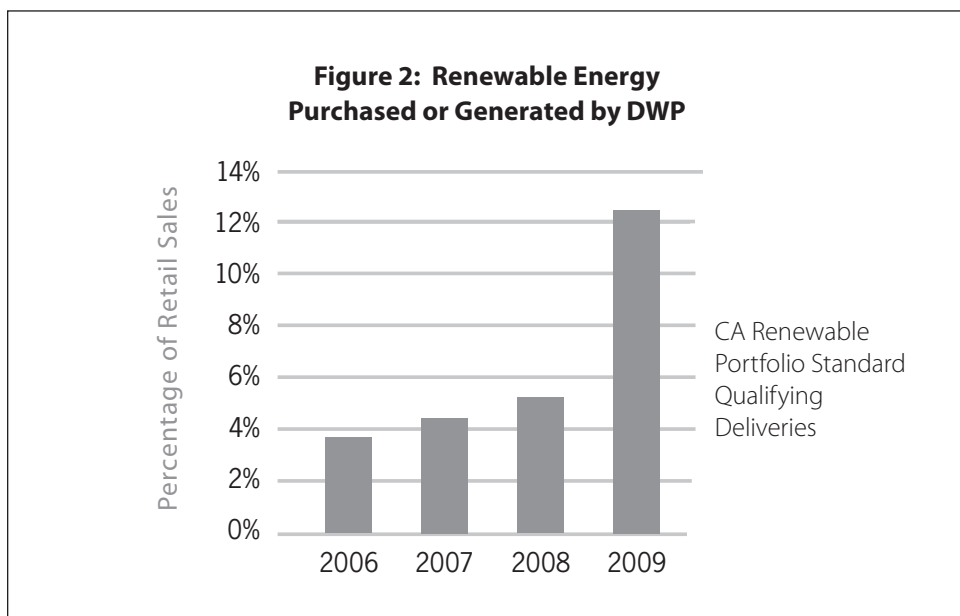
winter and buy green power in the summer.²⁶ By 2001, the DWP also offered the chance to earn a rebate of five dollars per watt in exchange for generating solar power and selling it back to the DWP.²⁷

The 2002 California Renewable Energy Portfolio Standard (RPS) triggered a big change in the DWP's renewable energy operations. Although the legislation exempted municipally-owned electric utilities from being formally required to adopt the statewide renewable energy standard, it did require municipalities to develop their own local standards. The City of Los Angeles formally adopted a renewable portfolio standard policy in 2005, which required the DWP to generate 13% of its power from renewable energy sources by 2010, and 20% by 2017.²⁸ The state and local renewable portfolio standards redefined the DWP's operating mission with respect to electric power services. Since its inception, the DWP has operated under the guiding principles of keeping power costs as low as possible and ensuring maximum grid reliability. The new standards created a formal regulatory requirement that the DWP integrate other public policy goals into its strategy and management.

After city energy policymakers shifted to a normative environmental renewable energy policy, the DWP's renewable power deal-making became more aggressive. In 2003, the DWP began work on a \$162 million dollar effort to erect a 120-megawatt, 80-turbine wind farm capable of serving 100,000 city residents in the high-elevation Tehachapi Mountains area northwest of the city. The DWP expected the project to boost the city's renewable power quotient to 3.7%. (The project started daily operations in 2009.) In 2005, the DWP became involved in an ambitious effort to build a major electric power transmission line from a power plant fueled by renewable geothermal, solar, and wind resources near the Salton Sea in Imperial County, California. Although estimated to produce enough renewable power to supply 1.5 million homes, the project did not survive intense political opposition from environmentalists and private landowners. In 2006, the DWP brokered a deal valued at \$280 million to purchase 82 megawatts of electricity from a wind farm in Wyoming. The DWP procured hydroelectric, wind-generated and landfill biogas generated power from British Columbia-based Powerex Corporation in 2007.²⁹ In 2009, the DWP negotiated an agreement to purchase 75 megawatts of geothermal power from *Comision Federal de Electricidad*—the power authority of Mexico.³⁰ The DWP partnered with the City of Glendale, California's Department of Water and Power, through the bond-issuing capacity of the Southern California Public Power Authority, to borrow \$140 million to finance the

Linden Wind Energy Project, a large wind farm in Washington State.³¹ The DWP also announced the completion of a 10 megawatt solar panel installation on the roof of the World Cruise Center at the Port of Los Angeles.³²

The environmental renewable energy policy also facilitated DWP's divestment from coal plants. In 2000, under pressure from environmental groups and the federal government to install exhaust "scrubber," the DWP sold its 20% stake in the Mohave Generating Station, a major regional coal-fired power plant based in Southern Nevada.³³ Following the Chick investigation, in August 2004, then-Mayor James Hahn moved against the DWP's coal dependency when he ordered the DWP to halt its plans to invest \$400 million into an expansion of the Intermountain facility.³⁴ The DWP was a major investor in the \$5.5 billion, Southern Utah-based Intermountain Power Project generation facility which completed construction in 1987.³⁵ Intermountain specializes in low-cost coal-fired electricity production, and as of 2004, the DWP was its biggest customer, consuming approximately 44% of its power output (approximately one third of the DWP's power generation). The DWP, through the Southern California Public Power Authority, had even heavily invested in a major transmission link from Intermountain to its Southern California substations called the Southern Transmission System.³⁶ May-



Source: California Energy Commission data

or Antonio Villaraigosa intensified the coal generation divestment policy by pledging in 2009 to ensure that the DWP's electricity generation would be "coal-free" by 2020.³⁷ Although the announcement had limited impact on the immediate effort to achieve the 2010 renewable portfolio standard objective, the goal was lofty. As of 2010, the DWP derived 39% of its power from two coal power plants: the Navajo Generating Station in Arizona and the Intermountain Power Project in Utah. The Renewable Portfolio Standard, perhaps the cornerstone of the DWP's normative environmental policy approach to renewable energy, obligated the DWP to divest.

Green Power Politics

Political actors and coalitions influenced the DWP as it shifted policy approaches and pursued renewable energy development projects. The Mayor of Los Angeles, by statute, is disproportionately influential in setting renewable energy policy. The Los Angeles City Charter grants the Mayor of Los Angeles authority to appoint the members of the DWP's General Manager and its Board of Commissioners.³⁸ Although the City Council must confirm the General Manager and DWP Board members, the DWP is effectively structured to operate according to the Mayor's policy decisions. The direct consequence of this structure is that the Mayor largely determines the scope of renewable energy policy. The ambition of Los Angeles energy policy and the aggressiveness of its pursuit are certainly a function of mayoral decision-making.

Current Los Angeles Mayor Antonio Villaraigosa's policy decision-making and advocacy have uniquely affected renewable energy development in Los Angeles. Villaraigosa's contributions have followed those of two predecessors whose policy differences are reflected in the mixed efficacy of the early years of the transition to renewable energy. Villaraigosa distinguished his administration through unrelenting dedication to the normative environmental approach to renewable energy policy. Villaraigosa, in some ways, has actually defined his administration through renewable energy policy, and he is the only Mayor to serve his entire tenure under the policy regime of the city's Renewable Portfolio Standard. Further, Villaraigosa mobilized public support for his effort to set the city's renewable energy policy agenda through heavy campaigning, his publication of renewable energy plans, and highly-publicized clashes with the Los Angeles City Council over the issue.

Villaraigosa's campaign for mayor defined him as a strong environmentalist and made clear his intent to push the DWP more aggressively in the direction of

a sustainable energy transition than his predecessors. Villaraigosa made clear his intent to approach renewable energy through a normative environmental framework. During the 2005 Los Angeles City Mayoral Election, Villaraigosa heightened attention on renewable energy policy by making his own transformative pledges central to his platform and by contrasting himself with then-incumbent Mayor James Hahn. Villaraigosa attacked Hahn for claiming credit for redirecting the DWP toward pursuing renewable energy and for proposing to close the City's Environmental Affairs Department.³⁹ Through his chairmanship of the City Council Committee on Transportation, Villaraigosa publicly questioned Hahn Administration officials on their failure to install energy-saving light-emitting diodes in city street lights.⁴⁰

In addition, Villaraigosa's personal characteristics, including his Mexican-American heritage, strong history of pro-environment policy positions, and background in labor organizing made him an attractive figure for progressive constituencies. Environmental group, in particular, regarded Villaraigosa as "an opportunity to shift the political dynamics of the city," and they heavily mobilized behind his candidacy.⁴¹ A few months after Villaraigosa took office these groups united to form *Green L.A.*, an umbrella coalition group whose aim was to help the mayor achieve his environmental goals by applying pressure on his administration as well as the City Council from the outside. *Green L.A.*'s relationship with Villaraigosa was so close, the Mayor appointed its executive director to the DBP Board of Commissioners.⁴² For its part, *Green L.A.* endorsed Villaraigosa's controversial solar power ballot measure, Measure B, and organized in support of the Mayor's successful effort to impose a "carbon surcharge" on the DWP customers.

Shortly after taking office Villaraigosa appointed a new Board of Commissioners for the DWP described as "aggressive and highly skeptical" in its posture toward existing DWP senior personnel and "relentless" in its intent to push DWP to add renewable energy to its fuel mix.⁴³ Villaraigosa also accelerated the Hahn-era renewable portfolio goal of 20% renewable by 2017 to a more aggressive pace of 20% by 2010. When, in 2006, complaints surfaced again about the stagnation of the *Green Power for a Green LA* program and the Pine Tree Wind farm, Villaraigosa's new Board of Commissioners called the lack of progress "unacceptable," and threatened to restructure DWP so that its principal manager of green power programs reported directly to the Board.⁴⁴

Villaraigosa further raised the profile of renewable energy policy when he published L.A.'s first climate action plan, "*Green LA: An Action Plan to Lead the*

Nation in Fighting Global Warming” in 2007.⁴⁵ The plan revealed a comprehensive sustainability vision and a sweeping ambition: “to transform Los Angeles into the greenest big city in America.”⁴⁶ It also set forth new renewable energy goals, such as a new declaration that the DWP would “transition to 35% of total electricity being from renewable sources by 2020.”⁴⁷ The plan made clear that the Villaraigosa Administration saw DWP public status as an asset that allowed them to be more aggressive in developing renewable energy resources than investor-owned counterparts. ‘*Green L.A.*’ drew public support even from Republican California Governor Arnold Schwarzenegger.⁴⁸ Villaraigosa repeated this stratagem in 2008 when he published a sweeping “*Solar L.A.*” plan, self-described as “the largest solar project undertaken by any single city in the world,” which pledged the DWP to generate 10% of peak summer electricity demand from solar power by 2020.⁴⁹

Villaraigosa’s leadership heavily influenced later renewable energy policy debates and political clashes. In the case of Los Angeles’s solar energy programs, Villaraigosa’s policy influence was not always positive or successful. Even before Villaraigosa published his solar plan, his allies on the City Council moved to have legislation, “*Green Energy and Good Jobs for Los Angeles Act*” requiring the DWP to generate 400 megawatts from solar power installations across the city by 2014.⁵⁰ Measure B’s backers—which included much of the city’s political elite including Mayor Villaraigosa, the DWP Board of Commissioners and City Council President Eric Garcetti—saw it as a way of creating new jobs, growing a new emergent industry, meeting growing energy demand, and achieving environmental protection goals.

Measure B’s opposition, which included City Controller Laura Chick, viewed it as an “end run” around the normal municipal legislative process made necessary because of the poor track record of city leaders in delivering on their green promises. Measure B opponents believed that Villaraigosa’s solar plan lacked sufficient detail and analysis and believed that it would suffer from poor implementation as a result. Ultimately, voters narrowly rejected Measure B at the polls in March 2009. After its defeat, defenders of Measure B claimed that the ballot initiative’s failure did not constitute a total rejection of future investment in solar power or renewable energy.

However, critics’ attacks on the ballot measure—that it represented back-room politics, was poorly thought-out, and was not affordable—took hold. Measure B’s defeat was Villaraigosa’s first major setback to any of his renewable energy poli-

cy proposals. Villaraigosa's decision to bypass normal city council channels clearly hurt public perception of his mass solar installation proposal. The measure's failure hurt the near-term development of solar power in Los Angeles.

Measure B's failure, ultimately had limited impact on Villaraigosa's political clout and stature. On the same day Los Angeles voters blocked Measure B's passage they solidly reelected Villaraigosa to a second term as mayor.⁵¹ Villaraigosa retained substantial political strength and continued to press for his aggressive renewable energy policy agenda. For example, in his second Inaugural address in July 2009, Villaraigosa showed few signs of backing away from his ambitious renewable energy goals when he claimed Los Angeles would be "aiming to get 40% of our power from renewable sources by 2020 and go 60% carbon-free by the end of the next decade."⁵²

In a reflection of his commitment to his bold renewable energy goals and his confidence in his ability to win the support of the City Council and the public, Villaraigosa made an unconventional decision to deal head-on with the issue of financing his renewable energy agenda. This was in spite of the growing reality that the global economic recession was affecting the Los Angeles economy, and city government itself was facing a budget shortfall. Even the DWP was running a budget deficit of \$6 million per week. Villaraigosa and the DWP spent months pressing the City Council to authorize increases in the base electricity rates charged to customers. The City Council, led by Council President Eric Garcetti, resisted repeatedly. In the course of the public debate and negotiations over the proposed rate increases, the DWP, which annually transfers some of its revenue to the City of Los Angeles's general fund, threatened to withhold a transfer of \$73 million, and Villaraigosa threatened to furlough city workers. In the end, Villaraigosa and the DWP prevailed.⁵³ In April 2010, the City Council authorized a politically difficult 4.5% rate increase, which would raise residential electricity bills on average \$2.50 per month.⁵⁴

Villaraigosa's consistent advocacy for aggressive renewable energy development measures, and his constant work to mobilize the public behind his ideas, enabled him to make remarkable progress in growing the city's renewable energy assets. His political strength allowed him to overcome obstacles to his renewable energy policies that might have prevented the city from achieving its renewable energy goals.

Lessons

The Los Angeles example provides lessons for those interested in local and regional transitions to renewable energy. One key lesson from the Los Angeles example is that approaches to renewable energy policy that depend on individualized, private demand to stimulate investment in renewable energy generation facilities face limitations in terms of the pace and scale at which they develop renewable energy resources and displace nonrenewable fuels. In Los Angeles, city officials developed a system in which electricity consumers volunteered to pay a special fee for renewable power and, in turn, that revenue was reinvested in developing renewable power generation capacity. Although the program was financially self-sustaining, it was constrained by low customer participation rates.

Ultimately, few people were willing to volunteer to pay higher rates for renewable power, and the program did not lead to substantial investment in renewable power generation capacity. However, this understates the value of renewable energy to the city as a whole and it underestimates the institutional means of the DWP, as the city's electric power provider, to pursue renewable energy development when compelled to do so as a part of its core mission. When city leaders began approaching renewable energy as a matter of public interest and adopted policies that more fully leveraged public resources to develop renewable energy resources, the city made much more substantial progress in converting its generation mix from hydrocarbons to renewables.

Another lesson is that regulation can accelerate change. State regulation helped trigger the DWP's entry into renewable energy service. When state officials enacted a Renewable Portfolio Standard (RPS), it included a requirement that publicly-owned utilities develop their own RPS. State regulation shaped the thinking of city leaders who used this information to shape their local laws to extend state laws. California Renewable Portfolio Standard laws passed in 2002 and 2006 both provoked the enactment of similar legislation in Los Angeles. The RPS laws added regulatory teeth to what were previously goals in rhetoric only. These laws changed the DWP's mission and forced it to take more aggressive action to develop renewable generation capacity.

An additional lesson is that political context affects the efficacy of the public sector. In Los Angeles, Mayor Antonio Villaraigosa's personal popularity, his coalition group alliances, and his direct advocacy for renewable energy policies combined have played an important role in helping Villaraigosa to push the DWP

to pursue a heightened pace and scale of renewable energy policy implementation. They also have helped him to win approval for controversial policies from a sometimes-resistant City Council. This contrasts with the example of former Los Angeles Mayor James Hahn whose political struggles over the course of his term prevented him from being as aggressive in implementation as Villaraigosa, even though he was responsible for repositioning renewable energy policy as a public and citywide environmental concern as opposed to a private preference. So policymakers must work, like Villaraigosa and his environmental coalition allies, to optimize the political circumstances for successful implementation of renewable energy policies.

Lastly, as is suggested by Van den Bergh and Bruinsma, well-managed transitions tend to happen only when the socio-technical regime to be changed is of limited complexity.⁵⁵ This has value for explaining why a transition happened in Los Angeles. Los Angeles's electricity regime is relatively unique in its administrative structure. Electric power in Los Angeles is exclusively provided and managed by the DWP. The DWP is managed and overseen by direct appointees of the city's mayor, and he plays a major role in determining the public policy mission of the organization. Effectively, in Los Angeles, both electricity policymaking and implementation are highly centralized, making them simpler regime structures.

Herbert Girardet elaborates on this idea. In considering cities' solar energy prospects, Girardet identifies what he sees as a central obstacle to the proliferation of clean energy. The problem is that electricity production based on coal and gas consumption has already reached their economies of scale and have been nurtured and protected by decades of government subsidies. Thus fossil-fuel based electricity is cheap to make, cheap to get to market and distribute, and more-or-less plentiful. Girardet concludes that only by equalizing the "playing field" can renewable energy technologies compete effectively with hydrocarbons. Here Girardet implies that through a state intervention in energy markets, in the form of a subsidy, governments can reduce the complexity of the system (by effectively eliminating the uncertainty of market competition dynamics) and make it easier to push the pace and scale of renewable energy development.⁵⁶ Girardet also states that reforming a city's energy supply depends substantially on who controls it, asserting that "the largest improvements in power distribution and consumption are realized by cities with a municipality-owned electricity company."⁵⁷

Although Girardet's analysis references a European context, his conclusion about the advantages that publicly-owned electric utilities have over privately-

held utilities is confirmed by the Los Angeles example, and is instructive for U.S. cities pursuing renewable energy transitions. Publicly-owned utilities can achieve fast progress in developing and deploying renewable energy systems because they are able to quickly achieve economies of scale by drawing on public treasuries and incorporating knowledge and resources normally used to run other, related public infrastructure systems. Essentially, this is what happened in Los Angeles. The DWP, as the U.S.'s largest publicly-owned utility with nearly 4 million customers, had large financial assets to apply to developing renewable energy resources. It also had extensive pre-existing personnel and electric power infrastructure assets giving it the ability to quickly plan and integrate renewable energy sources into its supply. Cities pursuing their own renewable energy transitions may find that they can move more quickly to integrate renewable energy resources into their power systems by designing it as a public enterprise.

Conclusion

The contextual change of a new state electric utility law created the motivation for local policy activity. However, it did not determine the nature of that activity in full. Policy actors in Los Angeles made their own policy choices. They chose between two different approaches: whether to treat renewable energy as a private chosen commodity or an environmental public good demanded by community norms. The Los Angeles DWP operated under the former policy approach in earliest phase of the transition, but under the leadership of Mayor Antonio Villaraigosa, DWP has shifted to the latter approach.

Villaraigosa's aggressive public goal-setting in combination with landmark state climate change legislation mobilized public support for the normative environmental renewable energy policy. Public disputes over a solar power ballot measure and proposed electricity rate increases showed the limits of the normative environmental approach but also underline the influence of public opinion and institutional politics on renewable energy policy outcomes.

The energy transition in Los Angeles suggests that the public sector has a role to play in leading sustainable change in the natural and engineered systems that undergird social and economic life. This paper argues that, for renewable energy transitions, in order for the public sector to fulfill its role in steering change it ought to operate within a policy framework that understands renewable energy as a public good.

Regulatory action at its broadest levels, such as state and federal regulation, remains a powerful but blunt tool for compelling local policy action. Political actors and coalitions do critical contextual work to convert broad regulatory mandates into actual policies, programs, and observable implementation. Cities pursuing their own renewable energy transitions might learn from the Los Angeles example by conferring greater responsibility on the public sector for implementing renewable energy policies, they can draw on existing public economies of scale to achieve a faster and greater pace of renewable energy development than is possible when done privately. ▀

(E n d n o t e s)

- 1 Although municipally owned utilities were not the recipients of hard portfolio requirements by the 2002 law, they were forced to develop their own renewable portfolio standard.
- 2 Clark, Woodrow, “The California Challenge: energy and the environmental consequences for public utilities,” *Utilities Policy*, Volume 10, Issue 2, June 2001, Pages 57-61.
- 3 “Arnie’s Uphill Climb,” *The Economist*, June 23, 2007.
- 4 Carlson, Ann E., “Implementing Greenhouse Gas Emissions Caps: A Case Study of the Los Angeles Department of Water and Power,” Issue 55:6, *UCLA Law Review*, pg. 1485, 2008.
- 5 The bill left in place, but not to be renewed, existing coal-fired power purchasing agreements with the Navajo Generating Station (contract ending in 2019) and the Intermountain Power Project (contract ending in 2027).
- 6 For a contrasting example, see Betsill, Michele and Bulkeley, Harriet. *Cities and Climate Change: Urban Sustainability and Global Environmental Governance*. London: Routledge, 2003. In their case study analysis of sustainable energy policies in the City of Denver, Colorado, they show how Colorado state government undermined Denver’s sustainable energy policies by denying it funding for energy programs and by passing laws loosening restrictions on greenhouse gases.
- 7 “DWP to Offer ‘Green Power’,” *Daily News of Los Angeles*, May 14, 1999.
- 8 *Ibid.*
- 9 “Green Power: CA City Is First To Use All Renewable,” *National Journal’s Daily Energy Briefing*, June 2, 1999.
- 10 Blair Swezey and Lori Bird, “Utility Green-Pricing Programs: What Defines Success?” *National Renewable Energy Laboratory*, NREL/TP.620.29831, September 2001, pp. 1-2.
- 11 Fine, Howard, “Environment-Friendly Power Proves Popular with Angelenos,” *Los Angeles Business Journal*, May 1, 2000. Quote: “In fact, the green-power market is by far the fastest growing segment of California’s electricity marketplace.”

- 12 Steinman, Jon, "Green Power May Be Too Pricey for the People," Los Angeles Times, 18, 1997; <http://articles.latimes.com/print/1997/nov/18/local/me-55201>.
- 13 "Retailers to Disclose Sources of Electricity Under Deregulation," California Energy Commission Press Release, October 15, 1997, http://www.energy.ca.gov/releases/1997_releases/97-10-15_retailers.html.
- 14 "Top Ten Utility Green Pricing Programs, November 2000," U.S. Department of Energy Office of Energy Efficiency and Renewable Energy, <http://apps3.eere.energy.gov/greenpower/resources/tables/topten1100.html> [Last Updated: 03/31/2004; Last Accessed: 04/20/2011].
- 15 "Airports to Use 'Green' Power Under New Agreement," City News Service, October 19, 1999; "L.A. International and Van Nuys Airports Go Green Under 10-Year Deal With DWP," Platts Power Markets Week, October 25, 1999.
- 16 "Kinko's Joins DWP's Green Power Program," Kinko's Press Release, PrNewsWire.com, February 12, 2003.
- 17 "City Approves Green Power Purchase — Among Largest in Nation," Los Angeles Department of Water and Power press release, Businesswire.com, March 9, 2001.
- 18 "DWP renewables program wins worldwide acclaim," Energy Services Bulletin, Western Area Power Administration, Vol. 21, No. 1, February 2002, <http://www.wapa.gov/es/pubs/esb/2002/02Feb/febesb3.htm>.
- 19 Deaton, Ronald F., "Report on the Department of Water and Power's RPS Programs," Report of the Chief Legislative Analyst, December 9, 2003, p.9, <http://www.DWP.com/DWP/cms/DWP005880.pdf>.
- 20 McGreevy, Patrick, "20% Energy Goal is Proposed," Los Angeles Times, June 5, 2004. Quote: "Only 2.2% of Los Angeles's electricity now comes from renewable energy sources, including solar, wind, geothermal and biomass power."
- 21 '3 cents per kWh': Deaton, "Report On The Department Of Water And Power's Rps Programs," p.11.
- 22 Barrett, Beth, "DWP Audit: Millions Wasted With Few Results," Daily News of Los Angeles, August 30, 2002, pg. N1.
- 23 Nash, James, "Audit Shows Las Angeles Public Utility Lags in Adding Clean Energy Sources," Daily News of Los Angeles, January 29, 2004.
- 24 Nash, James, "Los Angeles agency's touted 'Green Power' program is running out of steam," Los Angeles Daily News, January 5, 2005.
- 25 Earnest, Leslie, "Lucky Brand Electrified by Green Power," Los Angeles Times, June 22, 1999 <http://articles.latimes.com/print/1999/jun/22/business/fi-48889>.
- 26 Freeman, S. David and Zarker, Gary. " 'Green-Power' Trade Colors This Tale of Two Cities," Seattle Post-Intelligencer, February 23, 2000, pg. A11.
- 27 Pendleton, Jennifer, "Valley Residents Warming Up to Local Solar Power Options," Los Angeles Times, March 6, 2001, <http://articles.latimes.com/2001/mar/06/local/me-33933>.
- 28 "Renewable Energy Policy," Los Angeles Department of Water and Power, DWPnews.

- com, <http://www.DWPnews.com/go/doc/1475/162047/Renewable-Energy-Policy> [last accessed, 04/17/2011].
- 29 Cavanaugh, Kerry, “2 ‘Green’ Electricity Contracts Get Ok,” Daily News of Los Angeles, March 24, 2007.
- 30 Zahniser, David, “Green Power From Mexico,” GreenSpace blog, latimes.com, February 3, 2009, <http://latimesblogs.latimes.com/greenspace/2009/02/green-power-fro.html?cid=147302430>.
- 31 Ward, Andrew, “A Green Wind Is Blowing for California Utilities,” The Bond Buyer, October 2, 2009, p.13, Vol. 75, No. 37.
- 32 “Port of Los Angeles Completes One Megawatt Solar Project on Rooftop of World Cruise Center,” Business Wire, December 9, 2010.
- 33 Martin, Hugo, “L.A. to Sell Share of Coal-Burning Plant,” Los Angeles Times, August 16, 2000, <http://articles.latimes.com/2000/aug/16/local/me-5171>; The LA City Council later decided to sell on half of its stake: Times Staff Writer, “L.A. to Retain 10% Stake in Power Station,” Los Angeles Times, November 28, 2001, <http://articles.latimes.com/2001/nov/28/local/me-9032>; On January 1, 2006, the Mohave Station was shut down after Southern California Edison, which owned 56% of the Mohave Generating Station, refused to invest in upgrades to the plant: Bustillo, Miguel, “Edison to Shut Down Polluting Coal Plant,” Los Angeles Times, December 30, 2005, <http://articles.latimes.com/2005/dec/30/local/me-mohave30>.
- 34 “DWP Ditches Plant Expansion; Hahn Shuns Coal For Cleaner Energy Source,” Daily News of Los Angeles, August 25, 2004.
- 35 Roderick, Kevin, “Coal-Fired Generating Plant : Power to the People--L.A. Reaps Bounty From Utah,” Los Angeles Times, June 12, 1987, http://articles.latimes.com/1987-06-12/news/mn-3933_1_intermountain-power-project.
- 36 “Southern Transmission System Project,” Southern California Public Power Authority website, <http://www.scppa.org/pages/projects/sts.html> [Last updated: 2008]; “Request for Recommendations for Southern Transmission System Project Upgrade Financing,” Southern California Public Power Authority, September 23, 2008, <http://www.energy.ca.gov/2005publications/CEC-700-2005-019/CEC-700-2005-019.PDF>.
- 37 Woodall, Bernie, “Los Angeles will end use of coal-fired power,” Reuters, July 2, 2009, <http://www.reuters.com/article/2009/07/02/us-coal-losangeles-idUSTRE56165X20090702?pageNumber=1>.
- 38 Baer, Walter; Mahnovski, Sergej; Edelman, Edmund; and Ingram III, James. “Chapter 2: The Current DWP Governance Structure,” in *Governance in a Changing Market*, The RAND Corporation Enterprise Analysis. 2001. http://www.rand.org/pubs/monograph_reports/2007/MR1189.pdf.
- 39 Orlov, Rick, “Mayoral Hopefuls Take Shots at Hahn,” Daily News of Los Angeles, December 22, 2004.
- 40 Nash, James, “Signal is Green on Lights,” Daily News of Los Angeles, September 9, 2004.
- 41 Zimmerman, Kristen, “Dare to Change: Environmental Justice Leadership For Climate Justice, Sustainable Communities And A Deep Green Economy,” Movement Strategy Center, 2010, http://www.movementstrategy.org/media/docs/1378_Dare_To-

Change.pdf. Many of the groups that supported his campaign formed the “Green LA Coalition” organization after the campaign to lobby and work with the Villaraigosa Administration on energy and environmental policy.

- 42 Zahniser, David, “DWP, planning panelists picked,” *Los Angeles Times*, December 13, 2008, <http://articles.latimes.com/2008/dec/13/local/me-briefs13.S6>.
- 43 Laidman, Dan, “Antonio’s DWP Picks Approved; Panel Sets Aggressive Tone,” *Daily News of Los Angeles*, September 24, 2005; McGreevy, Patrick, “Villaraigosa Appoints New DWP Board,” *Los Angeles Times*, August 1, 2005.
- 44 Laidman, Dan, “Peeved Commissioner Proposes City ‘Green Power Czar’; Critics Say Utility Moving Too Slowly,” *Daily News of Los Angeles*, March 28, 2006.
- 45 Notably, the ‘Green L.A.’ plan was released approximately one month after New York City Mayor Michael Bloomberg published his own comprehensive sustainability plan, “PlaNYC 2030.”
- 46 Villaraigosa, Antonio. “GREEN LA: An Action Plan to Lead the Nation In Fighting Global Warming,” City of Los Angeles, May 2007, p.9.
- 47 Villaraigosa, Antonio. “GREEN LA: An Action Plan to Lead the Nation In Fighting Global Warming,” City of Los Angeles, May 2007, p.4.
- 48 Cavanaugh, Kerry, “Mayor’s Plan To Curtail Warming; City Agenda Called Most Ambitious In U.S.,” *Daily News of Los Angeles*, May 16, 2007.
- 49 Villaraigosa, Antonio, “The Los Angeles Solar Energy Plan,” City of Los Angeles, November 24, 2008, pp. 3-6; http://www.ci.la.ca.us/Mayor/stellent/groups/electedofficials/@myr_ch_contributor/documents/contributor_web_content/lacity_004982.pdf; “Mayor Villaraigosa Unveils Largest Solar Power Plan In America,” LA Mayor’s Website, http://www.ci.la.ca.us/Mayor/villaraigosaplan/EnergyandEnvironment/ClimateChange/LACITY_004983.htm.
- 50 “Scanning the Area: Council to Push for Solar Power,” *Daily News of Los Angeles*, October 15, 2008.
- 51 Zahniser, David and Willon, Phil, “L.A. Mayor Villaraigosa reelected; city attorney race in runoff,” *Los Angeles Times*, March 5, 2009, <http://articles.latimes.com/print/2009/mar/05/local/me-villaraigosa5>.
- 52 “Second Inaugural Address,” Mayor of the City of Los Angeles website, July 1, 2009, <http://mayor.lacity.org/PressRoom/INAUGURATION/index.htm>.
- 53 Zahniser, David and Willon, Phil, “L.A. council approves 4.5% electricity rate increase,” *Los Angeles Times*, April 15, 2010; <http://articles.latimes.com/2010/apr/15/local/la-me-la-budget15-2010apr15>.
- 54 “Los Angeles takes new step toward renewable energy,” *Xinhua General News Service*, March 19, 2010.
- 55 Van den Bergh, Jeroen and Bruinsma, Frank, “The transition to renewable energy: background and summary,” in *Managing the Transition to Renewable Energy*. Cheltenham, UK: Edward Elgar. 2008. Print.

- 56 For another take on the benefits of reducing system complexity for easing the governance of renewable energy transitions, see Betsill, Michele and Bulkeley, Harriet. *Cities and Climate Change: Urban Sustainability and Global Environmental Governance*. London: Routledge, 2003. Print. In their case study of the city of Denver, Colorado, city energy policymakers achieved success at implementing renewable energy policies when they applied to programs within Denver's regulatory boundaries and applied to city government. They were less successful extending those policies outside of the city or even outside of city government because of policy incoherence and expanding political complexity.
- 57 Giradet, Herbert. *Cities, People, Planet*. Hoboken, NJ: Wiley Academy. 2004. Pp.181.

Transparency in OLC Statutory Interpretation

Finding a Middle Ground

Daniel Cluchey

ABSTRACT

Many potential policy problems arise when lawyers within the Department of Justice's Office of Legal Counsel (OLC) determine that a congressional statute does not apply to the Executive Branch. Most OLC opinions of this nature are not currently required to be disclosed to the public or Congress, despite their having the binding force of law over Executive Branch personnel. As a result of this legal regime, Executive Branch officials are capable of implementing, at times secretly, policy programs that would otherwise be impermissible but for unreported OLC opinions providing them with legal cover. This paper recommends a new standard for mandating disclosure of these opinions that strives to protect interagency candor while preventing the implementation of policies that rely on secret Executive Branch law. The proposed mechanism for achieving this balance is a retroactive trigger; rather than mandate reporting any time OLC makes a determination that a statute does not apply to the Executive Branch, this system would make unlawful any policy program that arises from such opinions unless the opinions in question were disclosed to Congress at least 30 days prior to the implementation of the policy. Under this arrangement, OLC could continue to shield opinions from scrutiny up until Executive Branch decision makers opt to use them to justify new policy programs, and the programs themselves could not commence without Congress having had the opportunity to review their legal bases.

ABOUT THE AUTHOR

Dan Cluchey is a member of Harvard Law School's class of 2012, and received a Bachelor of Arts in Political Science from Amherst College in 2008. A native of Cape Elizabeth, Maine, Dan intends to pursue a career in public service and communications at the federal level. He will be working as a speechwriting intern for Attorney General Eric Holder during the summer of 2011.

Introduction

The White House Office of Legal Counsel (OLC) stands at the nexus between the law as written and the law in execution, the hermeneutical prism through which congressional action is rendered for the purpose of federal policymaking. Legal by nature but political by dint of its location within the Executive Branch, OLC exercises its prodigious interpretive power from a delicate place—striving to provide objective legal advice while remaining “politically and philosophically attuned to the policies of the administration.”¹ The inherent tension between the dual goals of objectivity and political support has colored Executive Branch lawyering since the creation of the Attorney General’s office in 1789.² Since its founding in 1934, OLC opinions have guided presidents in moments of great import. Luther Huston notes as examples the following:

[I]n 1940, the “Lend-Lease” opinion of Attorney General Robert H. Jackson gave President Roosevelt legal authority to transfer American destroyers to England in return for the right to establish naval and air bases in British possessions. In 1957, the Office of Legal Counsel justified the use of federal troops in Little Rock, Arkansas, to enforce a court order that the schools be [de]segregated. And in 1963, the Office devised the basis for the quarantine of Cuba during the missile crisis.³

For all of its influence over Executive Branch decision making,⁴ however, OLC is not subject to anything approaching the level of scrutiny imposed on most actors engaged in binding statutory interpretation. Many OLC opinions go undisclosed, and the overwhelming majority of Executive Branch interpretations never face judicial review.⁵ Naturally, there has been ample demand for increased OLC transparency, particularly in the wake of the controversy surrounding the so-called torture memos issued by OLC during the first term of George W. Bush’s presidency.⁶

The value to be gained from heightened disclosure of OLC analysis is largely self-evident. When Executive Branch lawyers determine that the president is not bound by a congressional statute, and are then not required to report their determination to Congress or the public at large, the door is opened to the prospect of wholly unfettered Executive power and potentially grave abuses of the rule of law. Congress has articulated its staunch antipathy to “secret” Executive decision making in a number of other contexts: the Freedom of Information Act “represents a strong congressional aversion to ‘secret (agency) law,’ and...an affirmative congressional purpose to require disclosure of documents which have ‘the force

and effect of law,”⁷ while the Administrative Procedure Act contains a number of provisions aimed at advancing the transparency of Executive Branch statutory interpretation with regard to the general public.⁸ Yet when it comes to mandatory disclosure of OLC opinions that enable Executive Branch personnel to disregard statutes, Congress has thus far failed to create the legal regime necessary to provide even a basic form of meaningful oversight.

This paper will recommend an entirely new structure for mandating disclosure of this particularly troublesome breed of OLC opinions, one that seeks to promote transparency for all legal analysis that leads to the implementation of programs in contravention of congressional statutes while protecting both those opinions that never result in controversial programs as well as OLC candor more generally. In order to propose such a regime, we must confront the apparent deficiencies that doomed Congress’ latest attempt to increase OLC transparency.

The OLC Reporting Act of 2008

The most recent effort to heighten OLC disclosure requirements beyond their current levels⁹ was the OLC Reporting Act, introduced in the Senate in September of 2008 by Sen. Russ Feingold (D-WI) and in the House of Representatives the following January by Rep. Brad Miller (D-NC).¹⁰

Asserting that OLC opinions concluding that the Executive Branch is not bound by a congressional statute constitute “truly a separate — and sometimes conflicting — regime of secret law,”¹¹ the bill’s authors proposed new reporting rules that would obligate the Attorney General to make a disclosure to Congress any time an opinion (1) determined that a federal statute violated the Constitution, (2) relied on the doctrine of constitutional avoidance and cited Article II or the separation of powers in determining that the application of a statute to members of the Executive Branch would trigger constitutional problems, (3) rested on a “legal presumption” against the application of a statute to the Executive Branch, or (4) concluded that a later act of Congress had deprived a statute of effect in an instance in which the second enactment did not expressly state an intent to supersede the first.¹²

The bill was met with considerable opposition by outgoing Attorney General Michael Mukasey, who argued that the expanded reporting requirements were both unconstitutional and an affront to critical policy interests, the latter of which will be addressed later in this paper.¹³

Mukasey raised two objections with regard to the constitutional question: first, that the bill would encroach upon the president’s authority “by purporting to prescribe the content, timing, and recipients of any classified disclosures the Executive Branch chooses to make in connection with [OLC] reports,” and second, that the advice provided by OLC cannot be mandatorily disclosed on the grounds that it is protected by the doctrine of executive privilege.¹⁴

On the first point, Mukasey relied upon OLC precedent as well as the rule, articulated in *Dep’t of Navy v. Egan*, that the president’s “authority to classify and control access to information bearing on national security ... flows primarily from [Article II] and exists quite apart from any explicit congressional grant.”¹⁵

On the second, he argued that OLC opinions are subject to three components of the doctrine of executive privilege—namely, the confidentiality traditionally afforded to attorney-client communications, presidential communications, and the deliberative processes of the Executive Branch—and justified their protected position on policy grounds, asserting that mandatory reporting would destroy the candid nature of OLC advice and deter Executive Branch officials from soliciting opinions from OLC out of a fear of prompting unwanted disclosure.¹⁶

At three points in his six-page memo condemning the bill, Mukasey decried the disclosure of OLC opinions that had not, and potentially would not ever lead to the actual implementation of an Executive Branch policy or program.¹⁷

In introducing the OLC Reporting Act, Feingold addressed the issue of disclosing opinions that did not serve as legal premises for program implementation:

To be sure, there are sound arguments for shielding from public disclosure... final OLC opinions that are not adopted as the basis for an executive branch policy...Indeed, in his testimony before the Constitution Subcommittee in April, the Deputy Assistant Attorney General for OLC acknowledged that the confidentiality interest in OLC opinions is “completely different” for opinions that have been implemented as policy, and that such opinions should be made public “as fast as possible.”¹⁸

The Supreme Court has spoken to this distinction as well, holding in *NLRB v. Sears, Roebuck & Co.* that Executive Branch agency opinions are not privileged when they “embody the agency’s effective law and policy.”¹⁹ Despite the divergent levels of interest in disclosure between opinions that lead to actual implementation and opinions that do not—a critical dissimilitude noted by Feingold,

Mukasey, and the Supreme Court—the OLC Reporting Act did not contemplate implementation as a factor in triggering mandatory disclosure, having opted instead to require reporting in all instances in which an opinion concludes that a statute does not apply to the Executive Branch.²⁰ As such, the bill as proposed was arguably weaker in both a constitutional sense and as a matter of policy due to the fact that it would have subsumed opinions that have not led to the actual implementation of an Executive Branch program.

The Implementation Trigger

If a new reporting regime is to be enacted, it would need to strike an appropriate balance between the dual and dueling interests of transparency and candor in order to be politically palatable. To that end, a system would have to be devised that mandated reporting of those opinions that have served, or are imminently poised to serve, as bases for program implementation, while keeping all other opinions outside of the bailiwick of disclosure rules.

The creation of secret law can be thought of as a two-step process: first, OLC makes a legal determination that the Executive Branch is not bound by a statute, and second, the Executive Branch implements a policy in reliance on that determination. While the bulk of the debate surrounding this issue has centered on the merits of using the first step as a trigger for OLC reporting (the chosen mechanism of the OLC Reporting Act²¹), scant attention has been paid to the concept of relying on the second step—the policy rather than legal genesis of secret law—as a trigger instead.

From a transparency standpoint, the problem with requiring the disclosure of opinions only at the moment of program implementation, of course, is that such a system would leave Congress with no time to question the Executive Branch's interpretation or intervene in the program before it begins. This can be remedied, however, by making the trigger a retroactive device. Under this system, when the Executive Branch chooses to implement a program that relies on an OLC opinion for its legality, it must disclose the opinion 30 days prior to the commencement of the program for the opinion (and therefore the policy) to be considered lawful by Congress.

The decision to execute a new policy would remain the event that triggers mandatory disclosure, but the policy would not enjoy legal support unless and un-

til the OLC opinion had been available to Congress for 30 days, giving lawmakers an appropriate amount of time to review the legal rationale and react accordingly. In essence, this would change the reporting requirement from a disclosure mandate into a rule prohibiting policy programs that rely on undisclosed opinions. The basic standard would then be that no Executive Branch program, the legality of which rests on an OLC opinion concluding for any reason that the Executive Branch is not bound by a congressional statute, can be implemented until 30 days after the disclosure to Congress of the OLC opinion from which it derives its legal rationale.

A regime that required disclosure of OLC opinions 30 days prior to the implementation of a potentially controversial program would effectively address a number of the concerns raised by both Feingold in the interest of Executive Branch transparency and Mukasey in the interest of protecting OLC candor and Executive communications more generally. Even the most fervent proponent of transparency would recognize that it is the implementation of a legally spurious program, and not the opinion rationalizing it, that is the true malfeasance to be guarded against. An OLC opinion that does not instigate a program, no matter how errant its analysis may be, cannot be said to rise to the level of secret law so long as it remains nothing more than the germ of potential secret law—that is to say, a secret opinion declaring that a law does not apply to the Executive Branch can do little harm until it is actually used to justify a secret policy.²²

The D.C. Circuit has spoken to this distinction with regard to the Executive Branch, noting in *Sterling Drug, Inc. v. FTC* that “to prevent the development of secret law within the [Federal Trade Commission], we must require it to disclose orders and interpretations *which it actually applies in cases before it*” (emphasis added).²³ While a semantic argument could be made that the opinions themselves constitute secret law, insofar as they are indeed interpretations of law that bind the Executive Branch,²⁴ the true danger spoken of when the concept of secret law is invoked is its application in a practice, policy, or program—an unenforced ‘law’ is no threat until and unless the specter of its enforcement emerges.

A reporting trigger tied retroactively to program implementation would protect the institution of OLC even as it increased transparency of the office’s most controversial and consequential opinions. Mukasey’s chief policy concerns with the OLC Reporting Act were that it would deter candid deliberation among Executive Branch lawyers, “chill” the Department of Justice from providing thorough analysis of potentially extralegal policy programs (particularly with regard to

the usage of those canons of construction²⁵ specifically contemplated in the bill), discourage actors in charge of decision making from requisitioning OLC when disclosure would be especially unwanted, and, as an overall consequence thereof, “degrade the quality of the resulting legal advice and, thus, the integrity of the government decisionmaking [*sic*] to which it pertains.”²⁶

Beginning with the issue of thoroughness, an implementation-triggered reporting regime would not distinguish between rationales employed by OLC personnel—disclosure would occur only if an accompanying program was to be implemented, regardless of whether a conclusion of non-applicability was reached by way of the avenues of constitutional avoidance, commander-in-chief powers, a presumption against the application of a statute to the Executive, etc. By tying the reporting trigger to the policy decisions of those Executive Branch officials charged with implementing programs rather than to the legal decisions of lawyers within OLC, the methodology of those lawyers in preparing opinions would be less apt to become contaminated by political concerns over which species of legal reasoning would or would not mandate disclosure. If a conclusion has been reached that the Executive Branch is not bound by a particular statute, OLC personnel will thus have no reason not to provide a thorough analysis or refrain from the use of appropriate canons of construction under a regime where their legal reasoning has no bearing on the disclosure of their opinions.

As for the candor of OLC opinions under an implementation trigger system, there is no reason to believe that it would be hindered by a reporting mandate if measures were taken within the prospective bill to protect it. The value of candor to Executive Branch decision making is indisputable—the Supreme Court has referred to the overwhelming importance of confidentiality in communications between high-level government officials and their advisors as “too plain to require” discussion,²⁷ and noted that “human experience teaches that those who expect public dissemination of their remarks may well temper candor with a concern for appearances... to the detriment of the decisionmaking [*sic*] process.”²⁸

There is relatively little interest in the disclosure of those portions of OLC opinions dealing with issues unrelated to the specific legal rationale used to explain the reasons for not applying a statute to the Executive Branch; political determinations, moral calculi, and discussions of inter-agency legal disputes are all examples of material that does not carry a compelling public interest in transparency. A proper standard for reporting, then, would be to require the disclosure of

actual OLC opinions (as opposed to the potentially less transparent “complete and detailed statement of the relevant issues and background” requirement put forward by the OLC Reporting Act and codified previously by Congress²⁹) redacted in such a way as to include only the totality of the legal rationale employed to reach its conclusion of non-application. This standard would protect candor wholly, save for only those instances when language is used to explain and support OLC’s legal interpretation of a statute.

The interest in disclosing to Congress the legal rationale used by the Executive Branch to unbind itself from statutes, as discussed above, is substantial, and easily trumps the governmental interest in confidentiality and the notion of executive privilege in all but the most extreme situations. Indeed, the protection of sensitive Executive Branch communications has been held by the Supreme Court to matter less than the public interest in prosecuting criminal suspects,³⁰ the latter of which being at the very least on par with the public interest in preventing the “abomination” of secret law.³¹ From a policy perspective, the prevention of programs that rely on secret law is paramount. Policy measures that are justified only by undisclosed opinions are concealed from the clarifying crucible of public discourse, and are by definition lacking in democratic legitimacy.

Mukasey’s third charge, that Executive Branch officials would shy away from soliciting legal advice from OLC under the reporting regime set up by the OLC Reporting Act, rings somewhat hollow. While it is impossible to know with certainty whether high-level personnel would evade lawyers within their own branch of government in order to implement secret programs that might trigger disclosure of an opinion authorizing them as legal (were such an opinion to exist), to do so would be to eschew legal cover for their actions in the event that the program was later found to be unlawful. While most criminal defendants charged with illegal actions cannot make use of an advice-of-counsel defense,³² Executive Branch officials who rely on OLC opinions enjoy a strong presumption of immunity borne of a tradition of non-prosecution³³ as well as a number of criminal defenses unavailable to the general public.³⁴ For Mukasey’s fear to become a reality, then, Executive Branch policy makers would have to be so ardently opposed to disclosure that they would intentionally forfeit the veritable promise of criminal immunity for themselves and their subordinates that accompanies the imprimatur of an OLC opinion—an unlikely scenario, to say the least.

While no reporting regime could ever completely satisfy both zealous advocates of open government and the staunchest defenders of Executive power, the system described above represents a compromise that would likely do more for transparency than the current regime and more for the protection of candor and Executive Branch communications than the OLC Reporting Act. Naturally, any prospective reporting regime mandating more disclosure than is presently required would presumably face a measure of resistance from a sitting administration attuned by nature to the preservation of its own authority.

Given the relatively favorable attitude of the Obama Administration toward OLC transparency³⁵—as evidenced notably by President Obama’s nomination of Dawn Johnsen, who lobbied strenuously on behalf of the OLC Reporting Act,³⁶ to the post of Assistant Attorney General in charge of OLC³⁷—the prospect of reform in the near term is not out of the question (particularly given the Republican majority in the House of Representatives³⁸ that, while likely sympathetic to the concept of executive power generally, has expressed a fervent hostility to executive power as exercised specifically by the current administration³⁹). This is not to say that support for a relatively stricter reporting system would be a foregone conclusion among either the White House or Congress, but the potential exists nevertheless, particularly given heightened concerns over the importance of Executive Branch transparency in the years following the George W. Bush Administration. With this opportunity in view, and with Mukasey’s policy concerns largely accounted for and transparency assured for those opinions that pose the greatest potential threat to the separation of powers, the question must now be asked: What constitutional and structural problems remain to be overcome by an implementation-triggered disclosure system?

Potential Obstacles

In addition to the political objections to a heightened reporting standard that would likely be levied by proponents of Executive power, an implementation-triggered disclosure mandate requiring the release of text from OLC opinions would need to confront the constitutional challenges articulated by Mukasey regarding the OLC Reporting Act.⁴⁰ The charge that mandatory reporting would run afoul of the separation of powers by encroaching upon the authority of the president to prescribe the “content, timing, and recipients” of the disclosure of classified Executive Branch communications⁴¹ finds its basis in OLC tradition and, Mukasey argues, Supreme Court precedent.⁴² *Dep’t of Navy v. Egan*, the lone case cited by

Mukasey in support of the idea that mandatory reporting would be unconstitutional, is relevant only to that fraction of OLC memoranda concerning statutes related to national security, and even then only arguably so.⁴³ While the *Egan* court “recognized the Government’s ‘compelling interest’ in withholding national security information from unauthorized persons in the course of executive business,”⁴⁴ it did so in the context of a private dispute in which a former Navy employee seeking review of the revocation of his security clearance was denied access to confidential records.⁴⁵

Additionally, the cases referenced by the *Egan* court in asserting the government’s interest in controlling national security information—*Snepp v. U.S.*, *U.S. v. Robel*, *U.S. v. Reynolds*, and *Totten v. U.S.*⁴⁶—all involved private individuals seeking to obtain confidential national security information from the government in the interest of pursuing private claims.⁴⁷ Indeed, no case appears to speak to the issue of the Executive Branch’s interest in withholding national security information from Congress as weighed not against a private interest, but rather against the substantial public interest in avoiding the prospect of secret law—the scenario imposed by the nondisclosure of the breed of OLC opinions discussed above.

Claims of executive privilege are softened by the same calculus that afflicts the *Egan* comparison. When it comes to the question of weighing executive privilege against the critical public interest in assuring against secret law, Raoul Berger offers the following historical perspective:

If the test of secrecy be protection of the public interest, then an alleged need, for example, to shield British-American military negotiations for defense against Russia, surely cannot be equated with the “need” for insulation of an Inspector General’s report so that “self-criticism” and “efficiency” may be promoted. The two are incommensurable. An assumption that information may be concealed from Congress on the plea of “administrative efficiency” would have shielded Fall, Denby and Daugherty from congressional investigation and have enabled them to despoil the nation of Teapot Dome, and all in the guise of taking “care that the Laws be faithfully executed”!⁴⁸

Berger notes that America’s Continental Congress adopted the view of British politician William Pitt in “expressly provid[ing] for legislative access to *all* papers in the Department of Foreign Affairs, even those of a ‘secret nature.’”⁴⁹ President Washington acted in accord with this sentiment with regard to national security information; even after the Jay Treaty—which resolved lingering issues between

the United States and Great Britain following the Revolutionary War—became “clamorously assailed” by the public, the President “felt constrained to put the ‘secret’ information before the Senate, disclaiming any ‘disposition’ (claim of privilege) to withhold any information that either House had a ‘right’ to require.”⁵⁰ Though presidents have, over time, changed their tune on this point,⁵¹ the Supreme Court has never spoken directly on the right of the Executive Branch to withhold information regarding security or foreign relations matters from Congress under the doctrine of executive privilege.⁵² No less an authority than Judge Learned Hand has articulated the Washingtonian principle that Congress, “especially now that appropriations for the armed forces are the largest items of the budget, should be allowed to inquire in as much detail as it wishes... in general about the conduct of the national defense.”⁵³

As for the assertion of executive privilege with regard to the nondisclosure of Executive Branch communications, both the OLC Reporting Act and the regime proposed in this paper would likely survive scrutiny in spite of Mukasey’s claims to the contrary. The issue has been addressed by the Supreme Court with regard to congressional disclosures exactly once, in the landmark Watergate-era case of *United States v. Nixon*.⁵⁴ Though the Court recognized the right of a president to assert executive privilege over intra-branch communications as constitutional, it pointedly noted that the privilege was “qualified,”⁵⁵ and articulated a holding essentially sympathetic to the D.C. Circuit Court’s observation the previous year in *Nixon v. Sirica* that the “application of executive privilege depends on a weighing of the public interest protected by the privilege against the public interests that would be served by disclosure in a particular case.”⁵⁶

In the wake of *United States v. Nixon*, a president who attempted to invoke executive privilege to protect internal communications would, if haled into the courts, be forced to disclose the material were the party requesting it able to “make an adequate showing of need.”⁵⁷ Historically speaking, executive privilege in all forms was a rare occurrence prior to the second half of the 20th century: between 1929 and 1939 it was employed all of three times,⁵⁸ contrasted with at least 130 invocations between 1964 and 1973.⁵⁹ The first attempted use of the privilege to withhold “‘conversations and communications’ between employees of the executive branch” did not occur until 1954, when President Eisenhower asserted the right in a directive aimed at stifling the investigative escapades of Senator Joseph McCarthy.⁶⁰ Given the paramount public interest in preventing the Executive Branch from implementing programs on the basis of secret law—as well as the

scant historical and judicial foundations for the legal challenges Mukasey asserts as standing in the way of the OLC Reporting Act—an implementation-triggered regime would almost certainly pass constitutional muster.

Implications for Public Policy

Despite its near-total absence from mainstream political discourse, the stakes of OLC reporting reform are strikingly high from a policy perspective. The public outcry that erupted during President George W. Bush's second term over the National Security Agency's warrantless wiretapping program⁶¹ serves as an illustrative example of the practical implications of secret Executive Branch law.⁶² The controversial NSA policy of conducting electronic surveillance of American citizens and resident foreign nationals absent a warrant was made possible by an OLC opinion written by John Yoo, the same former deputy assistant attorney general who authored the so-called torture memos in 2002.⁶³

The surveillance opinion—which, save for a handful of excerpted sentences released to the public in March 2011,⁶⁴ remains confidential to this day⁶⁵—contained apparently intentional misrepresentations of the Foreign Intelligence Surveillance Act (FISA) and relied upon overt omissions of statutory language in order to legally empower the President to conduct warrantless surveillance in contravention of the Fourth Amendment and Congressional decree.⁶⁶

Yoo's memorandum laid the groundwork for an NSA policy dubbed by the Bush administration as the "Terrorist Surveillance Program,"⁶⁷ an initiative that would come to be widely criticized as much for its overbroad scope and total clandestinity as for the threats it posed to basic and long-standing notions about American civil liberties.⁶⁸ The program of warrantless surveillance of electronic communications involving American citizens—plainly unlawful in an ordinary legal context and expressly prohibited by an act of Congress⁶⁹—was thus rendered legal for Executive Branch purposes, enacted as a matter of policy, and kept secret for a time from Congress, all on the basis of an OLC opinion that "exhibit[ed] disregard for the lawyer's role as crafter of persuasive argument on the basis of relevant legal authority" and which "seem[ed] clearly intended to sanction a policy that no court would ever consider."⁷⁰

Given the controversy surrounding warrantless wiretapping, it is not difficult to imagine the threat to conscionable, transparent policy-making posed by

the current lack of a balanced and effective OLC reporting regime. An Executive Branch that is permitted to ignore, by way of undisclosed legal manipulations, any duly enacted Congressional statute it stands opposed to in order to justify a policy implementation that would otherwise be considered patently illegal is an obvious danger to the very notion of democratic governance. Under an implementation-triggered reporting system akin to the mechanism described herein, OLC would be free to issue opinions authorizing the President to act in contravention of FISA (or any other statute), but those opinions would have to have been made available to Congress prior to the implementation of any policy to which they lend sanction for them to have binding legal legitimacy. Alerted in advance to the prospect of programs such as warrantless wiretapping, the possible torture of enemy combatants, or any other potentially unlawful policy, Congress would at last be equipped with an indispensable and constitutionally critical weapon it presently lacks—the power to take action prior to the implementation of controversial policy measures.

Conclusion

The accumulation in one branch of the powers of both authoritative interpretation and execution of the laws is venom to a free society; this has been a bedrock principle of American government since the time of the country's founding.⁷¹ While the Executive Branch is doubtlessly entitled to its view of the applicability of congressional statutes to its own personnel, the foundational tenets of our system of separated powers dictate that it is not entitled to breathe life into Executive programs that stand in direct opposition to Congress by way of secret legal sanction. As Justice Robert Jackson famously expressed in *Youngstown Sheet & Tube Co. v. Sawyer*:

When the President takes measures incompatible with the expressed or implied will of Congress, his power is at its lowest ebb... Presidential claim to a power at once so conclusive and preclusive must be scrutinized with caution, for what is at stake is the equilibrium established by our constitutional system.⁷²

To take Jackson's claim seriously is to reject the notion that OLC opinions authorizing the actual implementation of programs engineered in contravention of duly enacted statutes can ever be withheld from Congress. America has already witnessed the troubling results that accompany nondisclosure in these situations. The employment of secret law which found its genesis in the so-called torture memos⁷³ sparked a firestorm of criticism for effectively authorizing the use of

torture by Executive personnel in the course of the War on Terror despite resting on a much-disparaged legal rationale.⁷⁴ The experiences of the George W. Bush Administration alone are enough to compel an OLC reporting regime that forcefully and cogently codifies the distaste for secret law which is, and has always been, central to the American philosophy of governance.

It should be noted that the implementation trigger regime would properly function as a floor rather than as a ceiling when it comes to the appropriate level of OLC transparency. OLC's current 'best practices' memorandum reflects this notion, asserting that the Office "operates from the presumption that it should make its significant opinions fully and promptly available to the public" in endeavoring to "[further] the interests of Executive Branch transparency, thereby contributing to accountability and effective government, and promoting public confidence in the legality of government action."⁷⁵

A reporting mandate would be a safeguard of open government, to be sure, but it would represent only a baseline for disclosure upon which rests the general philosophy of OLC, a philosophy at its best when properly attuned to the merits of Executive transparency. Time will tell what, if any, mechanisms Congress chooses to implement with regard to the disclosure of future OLC opinions, but, regardless of the form, it is plainly in the best interests of our public policy and constitutional structure that they pursue—carefully, responsibly—a regime that brings to bear the promise of a society undefiled by the scourge of secret law. ▀

(A c k n o w l e d g e m e n t s)

A version of this paper was written originally for David Barron's "Lawyering for the President" course at Harvard Law School; I wish to thank Professor Barron—who himself served as Acting Attorney General in charge of OLC from January 2009 to July 2010—for his guidance and insight, as well as the students in that course for many productive hours of thoughtful discussion.

(E n d n o t e s)

- 1 William H. Rehnquist, *The Old Order Changeth: The Department of Justice Under John Mitchell*, 12 *Ariz. L. Rev.* 251, 252 (1970); *see also* Jack Goldsmith, *The Terror Presidency: Law and Judgment Inside the Bush Administration* 34 (2007) ("Philosophical attunement with the administration is legitimate...").

- 2 Nancy V. Baker, *Conflicting Loyalties: Law and politics in the Attorney General's Office, 1789-1990* 55 (1992).
- 3 Luther Huston, *The Department of Justice* 60 (1967); *see also* Douglas W. Kmiec, *OLC's Opinion Writing Function: The Legal Adhesive for a Unitary Executive*, 15 *Cardozo L. Rev.* 337, 338 (1993).
- 4 *See* Posting of Jack Balkin to Balkinization, available at <http://balkin.blogspot.com/2009/02/is-office-of-legal-counsel.html> (Feb. 18, 2009, 7:05 EST) (“[T]he OLC creates binding law for the Executive Branch. In theory, the President could decide to ignore the OLC’s opinions, but in fact he never does.”).
- 5 Randolph D. Moss, *Executive Branch Legal Interpretation: A Perspective from the Office of Legal Counsel*, 52 *Admin. L. Rev.* 1303, 1304 (2000).
- 6 *See* Memorandum for Alberto R. Gonzales, Counsel to the President, from Jay S. Bybee, Asst. Atty. General, *Standards of Conduct for Interrogation Under 18 U.S.C. §§ 2340-2340A* (Aug. 1, 2002).
- 7 *NLRB v. Sears, Roebuck & Co.*, 421 U.S. 132, 153 (1975) (citations omitted).
- 8 *Administrative Procedure Act of 1946*, Pub. L. No 79-404, 60 Stat. 237 (codified at 5 U.S.C. §§ 551-559, 701-706 (2006)); *see also* Sudha Setty, *No More Secret Laws: How Transparency of Executive Branch Legal Policy Doesn't Let the Terrorists Win*, 57 *U. Kan. L. Rev.* 579, 626 (2008).
- 9 28 U.S.C. § 530D(a)(1) (2006) (“The Attorney General shall submit to the Congress a report of any instance in which the Attorney General or any officer of the Department of Justice establishes or implements a formal or informal policy to refrain from enforcing, applying, or administering any provision of any Federal statute... on the grounds that such provision is unconstitutional...”).
- 10 *OLC Reporting Act of 2008*, S. 3501, 110th Cong. § 2 (2008); *Office of Legal Counsel Reporting Act of 2008*, H.R. 6929, H.R. 278, 11th Cong. § 1 (2009).
- 11 148 Cong. Rec. S8860 (daily ed. Sep. 16, 2008) (statement of Senator Feingold).
- 12 *Id.*; *and see* *OLC Reporting Act of 2008*, § 2.
- 13 *Opinion of the Att’y General, Michael Mukasey, Constitutionality of the OLC Reporting Act of 2008* (Nov. 14, 2008), available at <http://www.usdoj.gov/olc/2008/olc-reporting-act.pdf>.
- 14 *Id.* at 3.
- 15 *Id.* at 2; *and see* *Dep’t of Navy v. Egan*, 484 U.S. 518, 527 (1988).
- 16 *Id.* at 4.
- 17 *See Id.* (“Section 2 of the bill would...;” require the Attorney General to submit to Congress...;” a report of any instance in which the Department issues an “authoritative legal interpretation” of “any Federal statute,” even if the legal construction has not risen, and may never rise, to the level of an Executive Branch policy not to enforce the statute in question...;” “Currently, 28 U.S.C. § 530D requires the Attorney General to report Department legal positions outside the litigation context only where the Department “establishes or implements a formal or informal policy”...;” “The bill would substantially expand the foregoing reporting obligations

by requiring the Attorney General to report on legal advice on statutory construction that does not, and may never, result in a “formal or informal policy to refrain from enforcing” a federal statute on constitutional or other grounds.”).

- 18 148 Cong. Rec. at S8859-S8860.
- 19 Sears, 421 U.S. at 153.
- 20 See OLC Reporting Act of 2008.
- 21 See *Id.*
- 22 Secret law, which was called “repugnant” by Judge Richard Posner in *Torres v. I.N.S.*, 144 F.3d 472, 474 (7th Cir. 1998), has been distinguished from “a source of ‘secret law’” in *Crooker v. Bureau of Alcohol, Tobacco & Firearms*, 6770 F.2d 1051, 1117 (D.C. Cir. 1981) (citing *Jordan v. U.S. Dept. of Justice*, 591 F.2d 753 (D.C. Cir. 1978)).
- 23 *Sterling Drug, Inc. v. F.T.C.*, 450 F.2d 698, 708 (D.C. Cir. 1971); and see generally Kenneth Culp Davis, *The Information Act: A Preliminary Analysis*, 34 U. Chi. L. Rev. 761, 797 (1967).
- 24 See, e.g., *Goldsmith* at 36 (“These executive branch precedents are ‘law’ for the executive branch...”).
- 25 Maxims used by interpreters of statutes in order to ascertain legislative meaning; not technical rules, but rather “axiom[s] of experience.” *Mastro Plastics Corp. v. N.L.R.B.*, 350 U.S. 270, 293 (1956).
- 26 Constitutionality of the OLC Reporting Act of 2008 at 4-5.
- 27 *U.S. v. Nixon*, 418 U.S. 683, 705 (1974).
- 28 *Id.*
- 29 148 Cong. Rec. at S8860; 28 U.S.C. § 530D(c)(2) (2006).
- 30 See generally *Nixon*, 418 U.S. at 706 (“The President’s need for complete candor and objectivity from advisers calls for great deference from the courts. However, when the privilege depends solely on the broad, undifferentiated claim of public interest in the confidentiality of such conversations, a confrontation with other values arises. Absent a claim of need to protect military, diplomatic, or sensitive national security secrets, we find it difficult to accept the argument that even the very important interest in confidentiality of Presidential communications is significantly diminished by production of such material for in camera inspection...); and see *U.S. v. Gillock*, 445 U.S. 360, 373 (1980) (noting that “the genuine risk of inhibiting candor in the internal exchanges at the highest levels of the Executive Branch” was of less value than the judicial power to secure evidence in a criminal proceeding).
- 31 K. Davis, *Administrative Law Treatise* 114, 137 (Supp. 1970); see also *Cox v. Dep’t of Justice*, 576 F.2d 1302, 1309 (8th Cir. 1978); *Stokes v. Brennan*, 476 F.2d 699, 701-2 (5th Cir. 1973); *Hawkes v. IRS*, 467 F.2d 787, 795 (6th Cir. 1972) (affirming Professor Davis’ observations on secret law).
- 32 See Wayne R. LaFare, *Substantive Criminal Law* § 5.6(e)(4), at 419 (2d ed. 2003); see also *U.S. v. Urfer*, 287 F.3d 663, 665 (7th Cir. 2002) (opinion of Judge Posner) (“If unreasonable advice of counsel could automatically excuse criminal behavior, criminals would have a straight and sure path to immunity.”).

- 33 See Posting of Marty Lederman to Balkinization, available at <http://balkin.blogspot.com/2005/12/mccain-amendment-ugly.html> (Dec. 16, 2005, 11:24 EST); and see *Harlow v. Fitzgerald*, 457 U.S. 800, 814 (1982) (noting that imposing liability on Executive Branch officials who reasonably relied on Executive interpretations of the law would “dampen the ardor of all but the most resolute, or the most irresponsible [public officials], in the unflinching discharge of their duties...”).
- 34 See Note, *The Immunity-Confering Power of the Office of Legal Counsel*, 121 *Harv. L. Rev.* 2086, 2092 (2008); see also U.S. Attorneys’ Manual, Title 9: Criminal Resource manual § 2055, available at http://www.usdoj.gov/usao/eousa/foia_reading_room/usam/title9/crm02055.htm. These defenses include entrapment by estoppel, innocent intent, and the public authority defense. Entrapment by estoppel “applies when, acting with actual or apparent authority, a government official affirmatively assures the defendant that certain conduct is legal and the defendant reasonably believes that official.” *U.S. v. Howell*, 37 F.3d 1197, 1204 (1994). Innocent intent requires that “(1) the defendant honestly believed that he was acting in cooperation with the government, and [that] (2) the government official or officials upon whose authority the defendant relied possessed actual authority to authorize his otherwise criminal acts.” *U.S. v. Fulcher*, 250 F.3d 244, 253 (4th Cir. 2001). The public authority defense applies to “defendants who have acted in reasonable reliance on a government agent’s authority to engage him or her in a covert governmental activity.” See *The Immunity-Confering Power of the Office of Legal Counsel* at 2096; see also *U.S. v. Pitt*, 193 F.3d 751, 756 (3d Cir. 1999).
- 35 See, e.g., Mary Alice Baish, *Obama Administration Scorecard*, 14 *AALL Spectrum* 7 (2009-2010); see also President Barack Obama, Memorandum for the Heads of Executive Departments and Agencies (Jan. 21, 2009), available at http://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment/.
- 36 See 148 *Cong. Rec.* at S8862.
- 37 See Eric Lichtblau, *Obama Names 4 for Justice Jobs in Break From Bush Path*, *N.Y. Times* (Jan. 6, 2009), available at <http://www.nytimes.com/2009/01/06/us/politics/06justice.html>.
- 38 See Jeff Zeleny, *G.O.P. Captures House, but Not Senate*, *N.Y. Times* (Nov. 2, 2010), available at <http://www.nytimes.com/2010/11/03/us/politics/03elect.html>.
- 39 See, e.g., Deirdre Walsh, *What’s at stake in the House: Hostility ‘on nitroglycerin,’* *cnn.com*, available at <http://www.cnn.com/2010/POLITICS/11/01/house.at.stake/index.html>.
- 40 *Constitutionality of the OLC Reporting Act of 2008* at 3.
- 41 *Id.*
- 42 *Id.*
- 43 Egan, 484 U.S. at 527; and see *Constitutionality of the OLC Reporting Act of 2008* at 2.
- 44 *Id.*
- 45 *Id.*
- 46 *Id.*

- 47 *Snepp v. U.S.*, 444 U.S. 507, 509 (1980) (former CIA agent attempting to publish a book about his experiences); *U.S. v. Robel*, 389 U.S. 258, 267 (1967) (member of a Communist organization denied employment at a shipyard that had been classified as a defense facility); *U.S. v. Reynolds*, 345 U.S. 1, 10 (1953) (widows of civilians killed in crash of Air Force plane seeking accident report); *Totten v. U.S.* 92 U.S. 105, 106 (1876) (Civil War spy claiming breach of contract for services rendered to President Lincoln).
- 48 Raoul Berger, *Executive Privilege v. Congressional Inquiry*, 12 *UCLA L. Rev.* 1287, 1290 (1964-1965) (citations omitted).
- 49 *Id.* at 1291.
- 50 *Id.* at 1291 (citations omitted).
- 51 The first unequivocal assertion of Executive Privilege as a means to withhold information from Congress did not occur until forty-six years after the creation of the American presidency, when President Jackson denied a congressional request for information concerning fraud in the sale of lands, ironically on the grounds that the information would be used by Congress in secret session rather than as part of a public investigation. See Norman Dorsen and John H.F. Shattuck, *Executive Privilege, the Congress, and the Courts*, 35 *Ohio St. L.J.* 1, 12 (1974).
- 52 See David B. Frohnmayer, *The Separation of Powers: An Essay on the Vitality of a Constitutional Idea*, 52 *Or. L. Rev.* 211, 227 (1972-1973).
- 53 *Learned Hand, The Bill of Rights 17-8* (1958); and see Berger at 1312.
- 54 Emily Berman, *Executive Privilege Disputes between Congress and the President: A Legislative Proposal*, 3 *Alb. Gov't L. Rev.* 741, 751 (2010); and see *Nixon*, 418 U.S. at 684.
- 55 *Nixon*, 418 U.S. at 706-13.
- 56 *Nixon v. Sirica*, 487 F.2d 700, 716 (D.C. Cir. 1973); and see *Id.*
- 57 Berman at 752; *Nixon*, 418 U.S. at 706-13; *In re Sealed Case*, 121 F.3d 729, 746 (D.C. Cir. 1997).
- 58 Stephen W. Gard, *Executive Privilege: A Rhyme without a Reason*, 8 *Ga. L. Rev.* 809, 811 (1973-1974); and see M. McCreary, *The Development of Congressional Investigatory Power* 103 (1940).
- 59 *Id.*; and see Statement of Attorney General Richard G. Kleindienst, *Hearings Before the Subcomm. on Intergovernmental Relations of the Senate Comm. on Gov't. Operations and the Subcomm. on Separation of Powers and Administrative Practice & Procedures of the Senate Comm. on the Judiciary*, 93d Cong. § 1 (1973).
- 60 Berger at 309.
- 61 Formally the President's Surveillance Program; see "Unclassified Report on the President's Surveillance Program," Offices of Inspectors General of the Department of Defense, Department of Justice, Central Intelligence Agency, National Security Agency, and Office of the Director of National Intelligence (July 10, 2009), available at <http://www.fas.org/irp/eprint/psp.pdf>.
- 62 See, e.g., Adam Liptak and Eric Lichtblau, *Judge Finds Wiretap Actions Violate the Law*, *N.Y. Times* (Aug. 18, 2006), available at <http://www.nytimes.com/2006/08/18/washington/18nsa.html>.

- 63 See Memorandum for Alberto R. Gonzales.
- 64 See Memorandum for the Attorney General, from John C. Yoo, Dep. Asst. Atty. General (Nov. 2, 2001), available at <https://webspaces.utexas.edu/rmc2289/OLC%20131.FINAL.PDF>.
- 65 See Posting of Oren Kerr to The Volokh Conspiracy, <http://volokh.com/posts/1236036389.shtml> (Mar. 2, 2009, 18:26 EST).
- 66 While the vast majority of Yoo's surveillance memorandum has not been disclosed, the Department of Justice has made public a later memorandum which contains a detailed overview of the legal rationale used by Yoo in the former opinion; see Memorandum from Steven G. Bradbury, Principal Dep. Asst. Atty. General, Re: Status of Certain OLC Opinions Issued in the Aftermath of the Terrorist Attacks of September 11, 2001, at 6-8 (Jan. 15, 2009), available at <http://www.justice.gov/opa/documents/memostatusolcopinions01152009.pdf>; see also Bradley Lipton, A Call for Institutional Reform of the Office of Legal Counsel, 4 *Harv. L. & Pol'y Rev.* 249, 252 (2010).
- 67 See, e.g., John Diamond and David Jackson, Surveillance Program Protects Country, Bush Says, *USA Today* (Jan. 23, 2006), available at http://www.usatoday.com/news/washington/2006-01-23-bush_x.htm.
- 68 See, e.g., James Risen and Eric Lichtblau, Bush Lets U.S. Spy on Callers Without Courts, *N.Y. Times* (Dec. 16, 2005), available at <http://www.nytimes.com/2005/12/16/politics/16program.html>; and see John Cary Sims, How the Bush Administration's Warrantless Surveillance Program Took the Constitution on an Illegal, Unnecessary, and Unrepentant Joyride, 12 *UCLA J. Int'l L. & Foreign Aff.* 170 (2007).
- 69 Foreign Intelligence Surveillance Act, Pub. L. No. 95-511, 92 Stat. 1783 (1978) (amended 2008).
- 70 Lipton at 253; see also W. Bradley Wendel, Legal Ethics and the Separation of Law and Morals, 91 *Cornell L. Rev.* 67, 120 (2005).
- 71 See, e.g., The Federalist No. 47 (J. Madison) (“‘There can be no liberty where the legislative and executive powers are united in the same person...’ The magistrate in whom the whole executive power resides cannot of himself make a law...”) (citing Montesquieu, *The Spirit of Laws* 162-74 (T. Nugent trans. 1878) (1748)).
- 72 *Youngstown Sheet & Tube Co. v. Sawyer*, 343 U.S. 579, 637-38 (1952) (Jackson, J., concurring).
- 73 See Memorandum for Alberto R. Gonzales.
- 74 See, e.g., Trevor W. Morrison, Constitutional Avoidance in the Executive Branch, 106 *Colum. L. Rev.* 1189, 1231 (2006); Harold Hongju Koh, Can the President be Torturer in Chief?, 81 *Ind. L.J.* 1145, 1149 (2006).
- 75 Memorandum for Attorneys of the Office, from David J. Barron, Acting Asst. Atty. General, Best Practices for OLC Legal Advice and Written Opinions (July 16, 2010), available at <http://www.justice.gov/olc/preparation-opinions.html>; recent published opinions of OLC can be found at <http://www.justice.gov/olc/memoranda-opinions.html>.

Illogical Framework

The Importance of Monitoring and Evaluation in International Development Studies

Jessica R. Pomerantz

Jessica R. Pomerantz is a second year Fellow at the Cornell Institute for Public Affairs, pursuing a Master of Public Administration. She was formerly a project analyst with the Institute for Public Policy at the University of New Mexico, where she completed her undergraduate degree in economics and political science. Prior to her studies at Cornell, Jessica worked at the office of the United Nations Permanent Observer, International Institute for Democracy and Electoral Assistance.

In my brief experience with monitoring and evaluation, I have become convinced that it is critically important both as an international development project component and as a field of academic study. Throughout my academic career at Cornell University, I have, at times, argued that monitoring and evaluation has actually impeded development efforts, but here I wish to amend my opinion. *Bad* monitoring and evaluation can sabotage development projects and our meaningful interpretation of development impacts; failures can appear to be successes and vice-versa. As a student and practitioner of monitoring and evaluation, I have drawn the conclusions listed below and I submit them for your consideration.

- Monitoring and evaluation is a key element of the international development industry applicable to many areas of public administration, domestic and international.
- International development failures could be discovered and averted or corrected given proper monitoring and evaluation activities.
- Anecdotal evidence from development activities in Afghanistan provides one example of the international community's lack of attention to monitoring and evaluation concerning an ongoing development catastrophe.
- Higher education ought to be filling the monitoring and evaluation knowledge gap but to date is failing to do so.

The Logical Framework Approach to International Development

A discussion of monitoring and evaluation should begin with a synopsis of the strengths and weaknesses of the logical framework—the international development industry’s early attempt to standardize project planning and design. In the late 1960s, a consulting firm developed the logical framework approach to planning and its associated planning matrix, the *LogFrame*, at the request of the United States Agency for International Development (USAID).

Today, the logical framework has become a ubiquitous, often obligatory planning mechanism used by an overwhelming majority of international development agents—government and non-governmental organizations alike. The LogFrame is a snapshot-like summary of a project in diagram form and describes a program in terms of input, output, outcome, and impact. These elements then provide the basis for monitoring and evaluation.

(Sample LogFrame matrix and a definition of the Logical Framework Approach (LFA) are available for reference in the appendix.)

Agencies that use the Logical Framework Approach and the LogFrame matrix, or some permutation of one or both, include the World Bank, Asian Development Bank, International Fund for Agricultural Development,

Inter-American Development Bank, European Commission, United Nations Food and Agriculture Organization, Department for International Development UK, and AusAID.¹ Despite this endorsement, there are a number of drawbacks and issues inherent to the use of the *LogFrame* as a planning tool and the logical framework approach as a planning methodology that organizations using and mandating them have largely ignored.

Critics contend that the methodology is too rigid, overly simplistic, ethnocentric, and devoid of organizational context. Donors often mandate the approach *ex post facto*, after development workers have already designed or implemented a project, disconnecting the process from reality. The approach favors quantitative data, sometimes rarely available or unreliable, over qualitative data, and easily ignores beneficiary experiences. It also restricts adaptation and often favors a single community perspective or outcome.

Monitoring and evaluation literature and trends over the past 30 years reveal that the LogFrame and the LFA are frequently in conflict with other industry paradigms, and development academics and professionals have repetitively lambasted them for various reasons. Robert Chambers of the UK-based Institute of Development Studies, a proponent of Participatory Rural Appraisal and an outspoken

critic of the LFA, claimed it was exclusionary, elitist, and ignorant of context. Rick Davies, a monitoring and evaluation staple and manager of the Monitoring and Evaluation NEWS website, has expressed similar sentiments, arguing that the LFA is not appropriately structured to capture the complexity of social change and change theory required to explain success or failure in international development planning.

David Korten, formerly of USAID and the Institute of Development Research, among other institutions, has criticized LFA on similar grounds, contending that it is contrary to people-centered development goals. Norman Uphoff, of Cornell University, bemoans reductionism in the social sciences and has argued against the linear nature of development planning in favor of acknowledgements of the chaotic nature of development, which are absent from the LFA.

Other arguments contend that because the United States constructed the LFA, it is often inaccessible to other cultures, and many of its underlying premises do not properly translate (even linguistically) to its beneficial use by the global south. Because the LogFrame and the LFA designers based the approach on western concepts of linearity and social processes, it becomes little more than a burden when partner organizations employ it. Despite this history of criticism of

the methodology behind the logical framework approach and the use of the LogFrame as a project-planning tool of international development agencies, it continues to be a mainstay of the industry.

This continuity has been possible predominantly because the LFA has remained unrivaled in its structure and summary functions. It provides an overview of project assumptions and desired outcomes at a glance, which satisfies the need for (the appearance of) efficiency and corporatized planning. LFA alternatives exist and the current trend in project planning and measurement is now leaning towards Results-Based Management at the level of the national and international development organizations such as USAID, which abandoned the LogFrame in 1996.

But NGOs and other international development organizations are still heavily LFA oriented, and the LogFrame is typically a mandatory component of a contractual obligation between an aid agency and a partnering organization. Alternatives have not ousted the LogFrame and the LFA simply because they are not comparable rivals. While the approach may be simplistic, the demands of context and perception largely disregarded by these frameworks *can* remain ignored because development workers poorly understand them and cannot easily represent them in a brief document.

Efforts to standardize monitoring and evaluation that resulted in the LFA and the LogFrame produced a range of critiques. Subsequent efforts to generate new paradigms of monitoring and evaluation techniques and new models for use in the field have led to alternatives, such as participatory evaluation and its offshoots. These alternatives have generated their own body of literature and critiques, and have yet to replace the LFA, still taught and widely mandated.

Remember that the LFA is just one component of the monitoring and evaluation process. I have not discussed the vast number of alternative and complementary techniques or the methods of pre- and post-project monitoring and evaluation that also demand further study.

What is the purpose of monitoring and evaluation? The *role* of monitoring and evaluation in project management and institutional performance depends on the *reasons* for monitoring and evaluation. Is the institution trying to modify procedures for an optimal result, to determine best practices, or to replicate practices in other villages, cities, regions, or countries of interest? Is the organization evaluating field processes in order to inform decisions at the headquarters-based management level? Are results meant to be published in reports to be read by donors and funding agencies? Is monitoring and evaluation merely a

policing technique to maintain control over operations, budget, or both?

There are a variety of premises underlying the purpose of monitoring and evaluation that can vary from organization to organization or from project to project. I raise these issues only to impress upon you that it is an enormous area that development organizations and academic institutions have barely addressed. Gains in the field lead to gains in international development, social programs, and social science. Our ignorance leads only to ineffective projects.

Monitoring and Evaluation of Rural Development in Afghanistan

I was privileged to observe one example of a large-scale national development program operating in a conflict/post-conflict setting for six months in 2010 while working in the Monitoring, Evaluation, and Reporting Unit at the National Area-Based Development Programme (NABDP), a joint initiative of the Ministry of Rural Rehabilitation and Development and the United Nations Development Programme (UNDP) in Afghanistan.

Monitoring and evaluation had become more of a hindrance to the program than an asset for a number of reasons, but the main reason was the timing and number of reports required. UNDP, donor countries, and

the ministry all required reports from the program: biweekly, monthly, quarterly, and annually. They increased in number in the short time I was there.

Additionally, UNDP mandated a results-based management approach to reporting but failed to provide training on how to do this. The result was a lot of criticism of the reports NABDP *did* provide, and then an extensive back-and-forth while NABDP struggled to meet the obscure and undeclared needs of UNDP quarterly reports. It was similar with the ministry and the donors. The program was entirely staffed by Afghan nationals, with the exception of a handful of international advisors. None were native English speakers (except me), but the reporting language was English.

Maladapted planning tools lead to failures in monitoring and evaluation, especially in a conflict/post-conflict situation in which staff members cannot easily leave the office and visit field sites on a regular basis due to the cost of travel and the risk incurred. The donor mandate (or industry precedent) of annual reporting often leads to meaningless performance benchmarks because the timeline of reporting is too narrow to conduct a descriptive impact assessment. For example, annual reports from NGOs operating in Afghanistan, such as the Afghanistan Civil Society Forum Organization or ActionAid International Afghanistan, reveal that monitoring

and evaluation often takes the form of counting the number of trainings staff attend in order to measure capacity building. A more apt measurement of organizational or individual capacity would be based on baseline levels of financial, managerial, or technical capabilities over a more feasible review period of five or ten years. As a result, monitoring and evaluation describes the inputs and the outputs but never the impacts or the outcomes.

It is not easy to pinpoint the source of weakness in monitoring and evaluation, and by proxy, of development strategy in Afghanistan. Failure in the basic monitoring and evaluation approach is an easy target because the literature critical of the LogFrame is already vast, but there are other factors of influence worth considering. Development agencies such as USAID over-report meaningless metrics such as spending or GDP, and other institutions often follow suit.

The Afghanistan National Development Strategy (ANDS) identifies 100 benchmarks of development for measurement, review, and appraisal. The international development partners and NGOs responsible for implementing ANDS lack the capacity to accomplish these objectives. Assessments commonly measure the outputs of their projects rather than the outcomes. Although donors are often interested in human development indicators, the impact is not accurately

measurable in the time span of reporting—at least, not in a quantifiable format. Development workers more typically use case studies of individuals or small cooperatives, interviews, or photographs as evaluation deliverables. NGOs cite a lack of capacity due to staff, time, and budgetary constraints along with a lack of baseline indicators.

Critics attack international development agencies' evaluation methods for being devoid of meaningful results. NGOs continue to mimic the inefficiency of larger institutions although they presumably have more organizational flexibility. Critics cite dependence on funding as the main reason. Resource dependence steers organizations, and the LogFrame is the most well known tool for aid disbursement. A fear of corruption, especially in Afghanistan, leads agencies to demand the illusion of accountability that the LFA provides.

This same approach also reduces very complex concepts to measurable factors, such as the idea of *empowerment* or *improved access to livelihood* even when it is not necessarily possible to quantify the outcomes. Monitoring and evaluation can easily strangle rather than facilitate project planning and development industry advancement. This corporatization of the public sector places undue pressure on organizations to standardize operations when greater flexibility and creativity

would produce a better result. It is the responsibility of higher education to lead the way.

The Underdeveloped Field of Development Monitoring and Evaluation

Monitoring and evaluation is a bit of an anomaly as a field of interest because in one sense there has been a rush to professionalize the field, but in other aspects there has been a lack of professional attention. Monitoring and evaluation can be the largest cost component of a development project budget and yet there is little standardization of training or credentials.

There is no shortage of agencies offering training in various forms. For example, I subscribe to a monitoring and evaluation list serve and in the month of January 2011 alone I received offers to sign up for an introduction to social auditing, monitoring and evaluation for results-based project management, participatory impact monitoring, Most Significant Change (MSC) training, knowledge management, and outcome mapping.

The cost ranges, the training topics, the scope and the course durations vary widely. I could study monitoring and evaluation for a few hundred dollars over a single weekend or pay thousands of dollars to attend a month-long training. I could receive a certificate from an unknown insti-

tute or a well-known university. But would there be a marked difference in the outcome if I spent a few hours of my time reading guidance documents posted online by large development agencies instead? There are as many approaches to monitoring and evaluation of international development projects as there are non-governmental organizations in the field. How can a practitioner or an organization determine which to use?

While agencies have rushed to capitalize on the need for monitoring and evaluation training, institutions for higher education have been disappointingly slow to react.

When I last checked, there were two universities that offered monitoring and evaluation studies as a formal PhD program. One of those was in the United States. Other universities offered some evaluation degrees, but usually tied them to education or public health studies only. Some have begun to offer certificate and weekend programs, but the underlying message here is that it does not warrant their full attention over the course of a masters degree or a PhD program. This is a huge mistake.

Consider Cornell University. We have departments of Applied Economics and Management, Policy Analysis and Management, the Cornell Institute for Public Affairs, the Cornell International Institute for Food, Agriculture and

Development (CIIFAD), and the College of Agricultural and Life Sciences. Which of these areas of study is exempt from the need for monitoring and evaluation training?

And yet, apart from the occasional course in qualitative or quantitative research methods, or haphazardly offered statistics courses across all departments, Cornell offers literally nothing in monitoring and evaluation studies. Not all institutions of higher learning are as slow to make gains in the social science of international development.

The Abdul Latif Jameel Poverty Action Lab at MIT is using randomized evaluations to study the impact of development projects. Using random trials may not be the best way to disburse development, but development experts consider them one of the most rigorous ways to measure effectiveness, and that is the point of higher education: to pioneer new industry methods through experimentation and research. In failing to address this need, Cornell is missing a huge opportunity to strengthen its position as a leader in higher education *and* in international development.

If you are unable to evaluate your own projects and programs, then you are not a practitioner or a professional; you are an amateur, and your efforts are just as likely to do harm as good. Without evaluation, you are engaged

in guessing, not social science. The development industry is rife with guessing, and guessing is a dangerous business.

The world is on the verge of failing to meet the Millennium Development Goals thanks to guessing. From what I have seen of the international development industry, I have to say that my own country, the United States, often appears either heavily guilty of guessing with respect to development activities, or guilty of veiling its geopolitical interests under the guise of development activities.

In its 2006 report, *When Will We Ever Learn? Improving Lives Through Impact Evaluation*, the Center for Global Development called for greater efforts in evaluating social programs. As Peter J. Matlon pointed out in his September 2009 presentation for the CIIFAD lecture series, USAID reports a success rate of 84% at the close of its projects, but what does *success* mean if the agency declares it immediately upon project completion?

An evaluation performed on conclusion of the development project can report only the number of wells constructed, for example. If the agency never reports the long-term impact, and the long-term impact is that the wells poison the local population with arsenic, the program model falls under suspicion due to the lack of transparency caused by improper evaluation,

and must cast doubt on the entirety of the agency's work.² This is exactly the kind of situation we need to avoid by enthusiastically promoting the study and dissemination of monitoring and evaluation best practices.

There are a few initial steps the institutions I named need to take in order to make a meaningful contribution to the field of monitoring and evaluation.

Cornell University ought to introduce a class—not another qualitative research methods course or a statistics class, but a class called Monitoring and Evaluation in International Development. Representatives from CIIFAD have been receptive to the idea of creating a workshop and bringing related speakers on the subject to Cornell for the CIIFAD lecture series, and this would be a good start to get the Cornell community talking and thinking about monitoring and evaluation.

UNDP and nearly all monolithic development organizations have published or sponsored the publication of manuals on monitoring and evaluation. The UNDP handbook I have is an indecipherable 232 pages. I would like to see smaller, more focused pamphlets or monographs that national staff (and foreign consultants) could turn to in times of need for instruction or clarification.

Something has to be done about training. I am loath to say there ought to be a certification for trainers or some

formal professionalization mechanism because I think the certification process is easily exploited, especially financially, and can eliminate creativity in the field. I think a good start would at least be a directory of monitoring and evaluation trainings, including feedback from participants that is on-line and international in scope.

I started learning about monitoring and evaluation when I enrolled in the International Planning and Development Workshop led by CIPA Professor David Lewis. Our task was to create an agricultural research and extension program for the Catholic University of

Sudan. I headed the monitoring and evaluation unit and designed a module from scratch for the agricultural students based on a participatory approach. I decided the Logical Framework Approach would be too technocratic and beyond the reach of this new school. Cornell flew Father Solomon Ewot, the dean of the Catholic University of Sudan, to Ithaca from Wau for our presentation. The entire class looked on nervously as a few of our chosen representatives presented our semester's worth of hard work. Then, after it was over, Father Ewot turned to me and said, "Where's the LogFrame?" ■

[Appendix]

The chart below depicts a basic LogFrame matrix presented by the Swiss Cooperation Office Afghanistan at the 8th Livelihood Platform on March 2, 2009 in Kabul. The Swiss Cooperation Office is an implementing partner of the Afghanistan National Development Strategy. The purpose of the Livelihood Platform is to hold meetings among development agencies in Afghanistan to share knowledge on baseline data, studies, and manuals related to monitoring and evaluation.

This summary of the Logical Framework Approach is quoted from the 2004 World Bank publication, *Monitoring & Evaluation: Some Tools, Methods, and Approaches*.

The logical framework (LogFrame) helps to clarify objectives of any project, program, or policy. It aids in the identification of the expected causal links—the “program logic”—in the following results chain: inputs, processes, outputs (including coverage or “reach” across beneficiary groups), outcomes, and impact. It leads to the identification of performance indicators at each stage in this chain, as well as risks which might impede the attainment of the objectives.

The LogFrame is also a vehicle for engaging partners in clarifying objectives and designing activities. During implementation the LogFrame serves as a useful tool to review progress and take corrective action.

Logframe				
Categories	Narrative Summary	Indicators	Means of Verification	Assumptions
Impacts	The expected benefits for the beneficiaries			
Outcomes	The intended changes (knowledge, skills, aspirations and behaviour) that the activity aims to achieve			
Outputs	The tangible products and services that the activity will deliver			
Activities	The actions that will be undertaken			
Inputs	The resources needed for the activity (personnel, finance, equipment and infrastructure, etc.)			

Source: Swiss Operation Office in Afghanistan

(End notes)

- 1 Finlayson 7
- 2 This is a reference to the often cited 1972 UNICEF well-digging project in Bangladesh as documented in the infographic *Vision Statement: When Failure Looks Like Success* by Andrew Zolli and Anne Marie Healy and published on Harvard Business Review's Idea Watch on 1 April 2011.

[References]

- Annual Narrative Report. 2009. Afghanistan Civil Society Forum Organization (ACSFo). Accessed December 6, 2010. www.acsf.af.
- Aune, Jens B. November 2000. "Logical Framework Approach and PRA: Mutually Exclusive or Complementary Tools for Project Planning?" *Development in Practice*, Volume 10, Number 5, pp. 687-690.
- CDA Collaborative Learning Projects. May 2009. The Listening Project: Field Visit Report — Afghanistan. Accessed November 6, 2010. http://www.cdainc.com/cdawww/pdf/casestudy/lp_afghanistan_report_revised_20100806_Pdf.pdf.
- Center for Global Development. May 2006. "When Will We Ever Learn? Improving Lives Through Impact Evaluation." Accessed May 1, 2011. <http://www.dochas.ie/pages/resources/documents/WillWeEverLearn.pdf>.
- Chambers, Roberts. 1997. "Whose Reality Counts? Putting the First Last." IT Publications: London, UK.
- Cordesman, Anthony. May 2007. "The Uncertain 'Metrics' of Afghanistan (and Iraq)." Center for Strategic International Studies, Arleigh A. Burke Chair in Strategy. Accessed December 6, 2010. <http://www.comw.org/warreport/fulltext/070521cordesman.pdf>.
- Cousins, J Bradley and Lorna M. Earl. Spring/Summer 1999. "When the Boat Gets Missed: Response to M.F. Smith." *American Journal of Evaluation*, Volume 20, Issue 2, pp. 309-318.
- Çuhadar-Gürkaynak, E., B. Dayton, and T. Paffenholz. 2009. Evaluation in Conflict Resolution and Peacebuilding, in *Handbook of Conflict Analysis and Resolution*, eds. D. J. D. Sandole, S. Byrne, I. Sandole-Staroste, and J. Senehi, Routledge, Oxon and New York, pp. 286-299.
- Dale, Reidar. February 2003. "The logical framework: an easy escape, a straitjacket, or a useful planning tool?" *Oxfam GB: Development in Practice*, Volume 13, Number 1.
- Davies, Rick. January 2004. "Scale, Complexity, and the Representation of Theories of Change." *Evaluation*, Volume 10, Number 1, pp. 101-121.
- De Coning, C. and Romita, P. 2009. "Monitoring and Evaluation of Peace Operations." International Peace Institute: New York, U.S.
- Dietz, Ton and Sjoerd Zanen. 2009. "Assessing interventions and change among presumed beneficiaries of 'development': a toppled perspective on impact evaluation." in *The Netherlands Yearbook on International Cooperation* 2008, ed. Paul Hoebink. Van Gorcum: Amsterdam, The Netherlands, pp. 145-163.
- Earle, Lucy. April 2003. "Lost in the Matrix: The Logframe and the Local Picture." Paper for INTRAC's 5th Evaluation Conference: Measurement, Management and Accountability? Amsterdam, The Netherlands.
- Finlayson, Peter. September 2004. "Strengthening Management Systems to Improve the Impact and Performance of

- Development Projects: The Application of Best Practice Methods in Asia and China." Melbourne University Private Working Paper Series, Working Paper No. 18: Victoria, Australia.
- Fujita, Nobuko, ed. June 18, 2010. "Beyond Logframe: Using Systems Concepts in Evaluation." Monitoring and Evaluation NEWS. Accessed November 13, 2010. <http://mande.co.uk/2010/uncategorized/beyond-logframe-using-systems-concepts-in-evaluation/>.
- Grace, Jo and Adam Pain. July 2004. "Rethinking Rural Livelihoods in Afghanistan." Afghanistan Research and Evaluation Unit, Synthesis Paper Series: Kabul, Afghanistan.
- Korten, David C. September-October 1980. "Community Organization and Rural Development: A Learning Process Approach." Public Administration Review, Volume 40, Number 5, pp. 480-511.
- Lang, Raymond. 2000. The Role of NGOs in the Process of Empowerment and Social Transformation of People with Disabilities, in Thomas M, Thomas MJ (eds.) Selected Readings in Community-Based Rehabilitation Series 1: Bangalore, India.
- Monitoring & Evaluation: Some Tools, Methods & Approaches. 2004. The World Bank: Washington, DC, US.
- OECD-DAC. 2007. "Encouraging Effective Evaluation of Conflict Prevention and Peacebuilding Activities: Toward DAC Guidance." A Joint Project of the DAC Network on Conflict, Peace and Development Co-operation and DAC Network on Development Evaluation: Paris, France.
- Pain, Adam. December 2002. "Understanding and Monitoring Livelihoods under Conditions of Chronic Conflict: Lessons from Afghanistan." Overseas Development Institute, The Livelihoods of Chronic Conflict Working Paper Series, Working Paper 187: London, UK.
- PRRP 2006: Reflection and Learnings. 2006. ActionAid International Afghanistan. Accessed December 6, 2010. <http://www3.actionaid.org/afghanistan/images/PRRP%202006.pdf>.
- Sherman, Jake. February 2009. "The Afghan National Development Strategy: The Right Plan at the Wrong Time?" Centre for Security Sector Management (CSSM), Journal of Security Sector Management: London, UK.
- Smits, Pernelle A. and Francois Champagne. December 2008. "An Assessment of the Theoretical Underpinnings of Practical Participatory Evaluation." American Journal of Evaluation, Volume 29, Number 4, pp. 427-442.
- Uphoff, Norman. 1996. "Why NGOs Are Not a Third Sector: A Sectoral Analysis with Some Thoughts of Accountability, Sustainability, and Evaluation." in Edwards M, Hulmes D (eds.) Beyond the Magic Bullet: NGO Performance and Accountability in the Post-Cold War World. Kumarian Press: London, UK.
- Vans der Velden, Fons. October 2003. "Capacity Assessment of Non-Governmental Development Organisations: Beyond the logical framework approach." Context, international cooperation: Contextuals No. 1.
- Wallace, Tina, with Lisa Bornstein and Jennifer Chapman. 2007. "The Aid Chain, Coercion and Commitment in Development NGOs." Intermediate Technology Publications: London, UK.

Now Hiring: 100,000 New Farmers

Phoebe Garfinkel

Phoebe Garfinkel received a Master in Public Administration degree from the Cornell Institute for Public Affairs (CIPA) in May of 2011. While at Cornell, Phoebe served as the Program Assistant for the Cornell Farm to School Program, as a Researcher at the UN Food and Agriculture Organization in Rome, Italy, and as the Chair of the CIPA Colloquium Series. Prior to pursuing her graduate degree, Phoebe worked in Vermont as the Food Systems Coordinator at Shelburne Farms and as Secretary for the Vermont Fresh Network Board of Directors. Phoebe grew up in Downeast Maine.

On March 6, 2011, *The New York Times* published an article under the headline “In New Food Culture, a Young Generation of Farmers Emerges.” The digital version of the article is accompanied by photos depicting the lives of “young farmers” in rural Oregon. The leading shot is of a young couple dressed in stylish leather jackets, plaid shirts, and colorful scarves, each holding a laying hen. Behind them is a two-story structure in clear need of renovation, and a chicken coop secured with chicken-wire doors. The caption of the photo reads, “Tyler Jones, 30, and his wife, Alicia, 27, are among an emerging group of people in their 20s and 30s who have chosen farming as a career.”

The article depicts farming as a socially inspired, hip career choice for young people. This in its own right is not a problem. Farming *should* be a great career choice for anyone, young or not-so-young. The real problem is that this portrayal is unrealistic. The unfortunate reality is that becoming a farmer in America is *really hard* if you aren’t previously endowed with at least one piece of the puzzle—access to capital or land.

Celebrating farming in American media is one tactic for leveraging food system reform, and I’m all for more mainstream media reporting on the re-localization of agriculture taking place across the country. But turning young farmers into celebrities is a far cry from actually helping them succeed

at the business of farming. America desperately needs new farmers. The best way to support them is to change the policies that prevent them from making a living. In fact, your next meal may depend on it.

Uncle Sam Wants YOU... to Farm

Consider some startling statistics from the United States Department of Agriculture (USDA) 2007 Census. The average age of the American farmer in 2007 was 57, up from 50 in 1978. Although the majority of farm operators are between 45 and 64 years old, it's the population of farmers ages 65 and older that's growing the fastest. While the number of farms owned by older people continues to increase, the number of farms owned by farmers under the age of 25 continues to decrease.

The average retirement age for farmers without off-farm income is 62 years old. Let's add three years, given increased fuel costs and the recent economic crisis. That bumps up the retirement age to 65, which means that the average American farmer will be retiring within the next five to seven years. Workforce replacement is not a problem in most other industries, but replacing retired farmers proves much more difficult.

Farming is, after all, not for the risk-averse: a farmer spends all of her money upfront on equipment,

inputs and seeds before she has even planted a single row. She relies on good weather, strong infrastructure and stable demand by the time harvest rolls around. Farming is not exactly the type of job you can learn from a textbook or an online course. To be a good farmer you have to know your land, your crops and your livestock, and you have to be thrifty, innovative, motivated, and tireless. These skills are best learned firsthand from a farmer, but since most small-scale farmers can't afford to pay their apprentices or interns, only the financially stable have the opportunity to learn farming from a farmer.

Let's not omit the fact that farming takes a serious toll on the body. The 14 months I spent living on a farm were the hardest physical months of my life, and my salary wasn't even tied to the success of my irrigation skills. In fact, the concept of a salary, for many beginning farmers, is foreign. Since most rely on large loans to get them through the initial three-plus years of growing, they earn very little income.

Yet another occupational hazard is lack of insurance. Most beginning farmers can't afford an individual insurance plan, so they go without—a scary thought for anyone who has ever driven a tractor or spent 14 hours a day bent over a row of weeds.

Given the serious hurdles a beginning farmer must face, it's no wonder

college graduates aren't lining up to farm. Who will grow our food when our farmers retire? Sure, urban farming is gaining popularity, and rooftop gardens are sprouting up all over the place. You probably know someone who knows someone who has just started farming or is planning to start farming, or who just bought a community-supported agriculture (CSA) share for the summer, or who found a new raw-milk supplier in the neighborhood. Don't get me wrong: I am in favor of this do-it-yourself attitude—I think everyone should have the experience of growing their own food.

But most people can't or don't want to: they don't have the time, space, or money to invest in raised beds and compost. Not everyone *should* farm: comparative advantage and economies of scale in agriculture are a primary economic driver, and it's illogical to think of America feeding itself (and exporting to international markets) from individual garden plots.

I am not the only one concerned about the country's impending lack of farmers. On June 30, 2010, the Senate Agriculture Committee met to review progress on the implementation of 2008 Farm Bill programs. Instead of reading his written remarks, Agriculture Secretary Tom Vilsack urged the committee to focus its attention for the 2012 Farm Bill on

new and beginning farmers (the USDA defines "beginning" as anyone with less than 10 years of experience). In his request, Vilsack noted that increasing small and medium-sized farming operations must be part and parcel of the broader goal to improve prosperity and economic development in the nation's rural areas, where political clout is slowly evaporating.¹

It's usual for presidential administrations to set milestones for public-sector job creation. Vilsack suggested setting the goal for new and beginning farmers at 100,000. It was an ambitious request, and unprecedented. Non-governmental organizations such as the National Sustainable Agriculture Coalition and the Community Food Security Coalition have been calling for support for new and beginning farmers for years, but the Administration had remained mostly silent on the issue until now.

Normally, when administrations call for increasing the number of public-sector workers, they roll out a detailed plan to do so. The 2008 Farm Bill appropriated \$17 billion to fund a Beginning Farmer and Rancher Development Program (BFRDP).² The Agriculture Secretary wants 100,000 new and beginning farmers planting seeds, hoeing rows, and heading to market in the next few years. What, exactly, is the plan?

This Mess We're in

It's worth taking a moment to remember how we got into this predicament of aging farmers in the first place.

Let us return to *The New York Times* article, in which the author cites, in the second paragraph, Earl L. Butz, a former Agriculture Secretary. Butz's economics were of the free-market variety, and he is best remembered for his famous "get big or get out" quote directed at American farmers in the mid-1970s. Butz served as assistant Agriculture Secretary during the Eisenhower years; in 1971, a narrow Senate vote of 51 to 44 confirmed him as the Secretary of Agriculture under President Nixon.

During his stint in office, Butz held that farmers should produce as much as possible and sell surplus overseas. Democrats and moderate Republicans criticized him for being a mouth-piece for agribusiness and corporate America at the expense of consumers and small farmers, and though farm income rose during his time in office, so did consumer food prices. As encouraged, farmers unable to scale up their operations left farming. Their land and equipment was taken by the bank, bought up by expanding farmers, or laid fallow.

Butz laid the groundwork for the consolidation of America's agriculture while steamrolling the notion of diversified farmers selling to regional markets. Fast forward 40 years and you

can see Butz's legacy represented in the giant monocultures in the Midwest and West Coast farming communities. But one can't place all the blame on Butz; policies that predate him are also responsible for the challenges facing beginning farmers today. For example, here's a brief look at the role of agricultural subsidies.

Sustainable agriculture advocates often use the term "subsidies" as code for a terrible, horrible, no good, very bad thing. I don't agree. I think agricultural subsidies are a great idea, just not in their current iteration. The concept of rewarding good behavior with an economic incentive is a tried-and-true method of influencing behavior. Economic incentives in the form of subsidies for beginning farmers, for example, would be one good way to encourage 100,000 young people to invest their careers in agriculture. The problem with today's agricultural subsidies is that they don't incentivize a healthy, equitable food system.

Modern agricultural subsidies originated from the New Deal and the Agricultural Adjustment Act of 1933. American agriculture was already protected by trade tariffs; support in the form of subsidies enabled the government to set prices for commodity crops and create plans for destroying livestock during periods of oversupply.³ The government kept commodity crop farmers in business by providing them income support *not* to grow during

times of oversupply. Initially, a tax on producers funded the subsidies, which were intended to be temporary.

The plan worked inasmuch as more farmers survived and food prices rose, but the trend of paying farmers *not* to produce certain crops took root. Since farm subsidies were and are geared toward commodity growers, America has since enjoyed an oversupply of corn, wheat, soybeans, cotton and rice, as well as their highly processed byproducts such as high fructose corn syrup.

Today, farmers who don't farm anything—and wealthy people who bought land that *used* to be farmed for commodity crops—receive large payments in the form of subsidies. The 2012 Farm Bill includes a subsidy portion for \$30 billion, of which \$5 billion are direct payments.

This system puts beginning farmers at a clear disadvantage for two reasons. First, farm payments drive up the price of land for beginning farmers. Agricultural land once productive with commodity crops is now valuable to landholders because it generates a profit even if uncultivated. Second, the government doesn't provide subsidies to non-commodity growers, so farmers who don't grow commodity crops don't receive direct payments and are therefore less competitive.

It's clear that today's subsidy system supports large-scale farmers and is responsible for the mass production

of corn, soybeans, wheat, cotton and rice—92 percent of the commodity spending programs go to these five commodities. It's also clear that beginning farmers are at a disadvantage as a result of agricultural subsidies.

But I don't believe that subsidies are the reason more people haven't started farming, so let's put subsidies aside for a moment and revisit the reality facing beginning farmers today.

So You Want to be a Farmer...

It is now in vogue for recent college grads to take a farm apprenticeship or to volunteer at a local CSA to “get their hands dirty,” but I was a bit of an anomaly when I graduated and started farming. For eight months I lived on a mid-sized vegetable farm in southern Colorado with a friend. He and I provided the labor for an organic vegetable farm and for a hog and chili farm two miles down the road. Like many beginning farmers, we chose to work for someone else because we weren't ready financially, mentally or physically to start our own farm.

Each week we took our products to a market an hour away to sell and trade what we could. Although the Western Slope of Colorado had a vibrant local agriculture community, southeastern Colorado lagged a bit behind: at the market we were the only vendors under 40 years old, and among the minority with four-year liberal arts

degrees. The few market regulars were thrilled to see us each week but could not understand why we were “wasting” our time farming. By the time the winter rolled around, it was clear that both farms were enduring serious financial hardship. Our \$7 per hour wage was no longer feasible for our employers, nor was the pork-for-work system we had going. Besides, I felt ready to live in a house with plumbing and a real stove, and to have health insurance. With no money and a car full of Mason jars with preserved fruits and vegetables, we relocated to Vermont to try again.

In Vermont, I spent six months on a highly diversified farm learning to build raised beds, dig deep trenches for water pipes, milk cows and make cheese. I lived in very comfortable apprentice housing with a thoughtful mentor at the ready. (The apprentice program I took part in was well-established and part of a much larger education operation). Although the farm life in Vermont was in many ways much easier than in Colorado—well-supported by a vibrant community of like-minded young farmers, and fun—I decided that I’d prefer to make a living supporting farmers in some way rather than farming myself. Furthermore, I noted immense differences between the farmers in Colorado and Vermont. Weather aside, it was clear that the Vermont farmers had something that the Colorado farmers didn’t.

Many of the farmers I met in Vermont were *young*—sometimes younger than I. They were fresh-faced, with business plans in hand. And a lot of them were *succeeding*. During my time in Vermont I got to know a lot of beginning farmers, producers, and entrepreneurs, and I spent a lot of time comparing Vermont to Colorado, and to my home state of Maine. Why was it cool to be a farmer in Vermont? How were so many of them able to make a living growing vegetables and making cheese? Why didn’t rural farmland across America buzz with the same excitement?

I will be the first to admit that Vermont is not representative of the norm—pastoral rolling hills dotted with red barns and Jersey cows are a dime a dozen—but it’s not just the agricultural history and landscape that draws so many beginning farmers. It took me several years to piece together the complexities of the system, but I came to understand that much of what enables the Vermont farmers to succeed is a support system composed of like-minded farmers, mentors and effective policy. I left Vermont after three and a half years for Cornell University to study how to design and implement policies to support beginning farmers across the country.

The View from the Hill

On April 14, 2011, Matt Starline, the owner of Starline Organics and member of the Ohio Ecological Food and

Farm Association, testified before the U.S. House of Representatives Agricultural Committee's Subcommittee on Department Operations, Oversight, and Credit to urge them to retain the Farm Service Agency (FSA) direct loan program. The FSA makes direct and guaranteed farm ownership and operating loans to family-sized ranchers who cannot obtain commercial credit from a bank. The USDA website notes: "FSA loans are often provided to beginning farmers who cannot qualify for conventional loans because they have insufficient financial resources."⁴

Starline is a beginning farmer from the Athens, Ohio area, and he runs a 50-acre diversified farm in the Appalachian foothills. "Diversified farm" means that instead of growing just one crop (such as corn), Starline grows many different types of vegetables, and has recently added livestock and grains. Risk aversion and biodiversity are two primary reasons for diversifying a farm. At the market level, if one crop fails you can fall back on the other to recoup at least a percentage of your investment. At the biophysical level, different crops deplete and replenish the soil in different ways; diversifying your crop can therefore reduce the dependency on inputs to maintain soil quality.

In his testimony, Starline stated that his farming practices are centered on sustainability.⁵ Reading through his testimony makes it clear he takes this

seriously: Starline Organics employs natural gas to heat the greenhouses, spring water for irrigation, plant waste as pig feed, and rotational grazing. Starline currently has three separate Environmental Quality Incentive Program (EQIP) contracts, and is applying for an agricultural easement as a long-term insurance policy for moneys the farm receives. Starline says:

I think my story is indicative of the opportunities in today's agriculture. Farming as a career choice is one of the most difficult occupations to enter. Limited access to land and markets, high input costs, and lack of sufficient support networks are major barriers to entry into agriculture. Yet the burgeoning local food movement and the growth in organics are just a couple of the trends that have more individuals and families interested in farming.⁶

Starline went on to say that he is \$300,000 in debt, primarily from buying land, even though land is relatively cheap in his area and his expenses are relatively low compared with someone who would start on an average-sized conventional farm. A loan from a Farm Credit institution made his land purchase possible, and he is applying for a FSA loan for a cold-storage unit, with the goal of expanding products and market share. At the conclusion of his testimony, Starline urged the committee to retain the program so that other young and beginning

farmers could overcome the “greatest hill to climb for a new beginning farmer”⁷: the initial start-up costs.

On the same day, Congress passed a final six-month continuing resolution (CR) that will fund the government through the end of the fiscal year. The CR cut \$3 billion — 14 percent — of discretionary agriculture spending relative to the 2010 fiscal year levels. The bill reduces funding for the Farm Service Agency credit program by \$433 million — a 27 percent cut in direct farm ownership loans that would have targeted beginning farmers.

Other cuts included \$118 million for the Natural Resource Conservation Service funding, \$64 million for Agricultural Research Service funding, \$126 million for the National Institute for Food and Agriculture funding, and \$504 million for the Women, Infants and Children feeding program — a cut that effectively eliminates reserves held for times of economic decline and high food prices. Finally, the CR entirely eliminated funding for ATTRA, the National Sustainable Agriculture Information Service that provides information and other technical assistance to farmers, ranchers, extension agents, and educators.⁸

For urban farmers and rooftop gardeners, these cuts may not have much of an impact: they don’t affect seed prices, and demand in local urban markets will likely remain steady

if not increase. But for farmers in rural areas, farmers who need a loan to buy land or who need technical assistance to help rid their crops of the season’s pests, these cuts matter. Matt Starline and farmers like him across the country will once again have to return to their business plans, shave off expenses and dig deeper to make farming a viable career choice.

Although these cuts are only stopgap measures, we aren’t likely to see much more pushback from the broader community because at this point it’s the 2012 Farm Bill that really matters.

Most people’s eyes glaze over when the Farm Bill is mentioned, so I’ll be brief. Here’s what you need to know: the Farm Bill (officially known as the Food, Conservation and Energy Act) is the primary agricultural and food policy tool of the U.S. government. It is an omnibus bill passed every four years, and it has enormous scope. The 2008 Farm Bill has 15 titles that cover a broad swath of agricultural and forestry issues, from commodities (income support for program crops) to rural development (funding for strategic planning, feasibility studies, and coordination activities across many government departments) to forestry (the U.S. Forest Service is housed in the USDA) and energy (funding for bio-refineries and bio-based products). The next Farm Bill cycle is in 2012, and the fight is already heating up.

The 2008 Farm Bill included a number of programs that were intended to benefit beginning farmers and ranchers, but it appears the USDA has fallen short on many of its promises:

First, there is a statutory Advisory Committee on Beginning Farmers and Ranchers, the sole purpose of which is to advise the Secretary on how the USDA can better serve beginning farmers through programs and policies. This committee's actions, after never missing a year during the Clinton and Bush Administrations, have entirely stopped since President Obama took office.⁹

Second, the Office of Advocacy and Outreach for department-wide policy coordination for beginning farmer and minority issues, funded by the 2008 Farm Bill, has made very little progress in the past three years and is still in the process of hiring staff.¹⁰

Third, the pilot program for linking retiring and new farmers through federal guarantees of private land contracts was converted to a federal program, but the USDA has yet to implement the program.¹¹

Fourth, the USDA recently funded the Conservation Reserve Program Transition-Incentive Program (CRP-TIP), which provides incentives for CRP contract holders who do not plan to return to farming to sell or lease their land to beginning or minority farmers.

This program necessitates an action plan for promotion and outreach.¹²

Making good on these pledges would be a good place for Secretary Vilsack to start laying the groundwork for his 100,000 new farmers. What could the 2012 Farm Bill do for beginning farmers? Here are a few ideas championed by the National Sustainable Agriculture Coalition and many beginning farmers across the country:

- **Eliminate the \$5 billion in direct agricultural payments.** The elimination of direct payment subsidies would not only help level the playing field for beginning farmers but could also free up money to go toward other useful programs such as the Beginning Farmer and Rancher Development Program.

- **Eliminate farm payment cuts to wealthy farmers and landowners.** If the USDA lowered the bar for payment cuts from \$750,000 to \$500,000 for people generating on-farm income, and from \$500,000 to \$250,000 for off-farm income, an estimated \$2.5 billion would be saved over 10 years. This would directly benefit beginning farmers by freeing up farmland: with big payments, many wealthy people use farmland as an investment strategy. This drives up the price of land, making the land nearly inaccessible to most beginning farmers. An even better option is the proposal by Senator Chuck Grassley (R-Iowa), who calls for a hard cap on payments to an individ-

ual with a maximum at \$250,000 (this has failed to pass the Senate).

- **Dedicate \$15 million mandatory annual funding for the Beginning Farmer and Rancher Development Program (BFRDP).** This is a competitive-grants program that supports partnerships and collaborations led by or including community-based organizations and NGOs with expertise in beginning farmer training and outreach.

- **Establish and provide annual mandatory funding for the Beginning Farmer and Rancher Individual Development Accounts Pilot Program (BFRIDA).** This program supports financial training and matched savings accounts to help beginning farmers and ranchers with limited means finance their agricultural operations. BFRIDA was funded in the 2008 Farm Bill but requires Congress-designated funds in the annual appropriations bill.

- **Provide a conservation funding ‘set aside’ for beginning farmers and ranchers and socially disadvantaged producers.** This provision would mandate 10 percent of all conservation program funds be set aside for the first four months of a year to be accessed by beginning farmers and ranchers and socially disadvantaged producers. After the four-month period, the money would become accessible to all producers. When encouraged up-front, this type of investment can foster long-term environmental stewardship.

Unfortunately, none of the above ideas has managed to gain a toehold in the Senate. The agribusiness lobby is one of the strongest in the country, and Corn Belt constituents make sure their voices are heard loud and clear for every committee vote.

Given the previous failures to alter America’s agricultural policy in favor of beginning farmers, a more important question might be: is federal policy the best tool for supporting beginning farmers? I don’t think there’s an easy answer to this question, but it is clear that the rationale for market intervention exists.

An undersupply of farmers means an undersupply of food. This, in the context of high consumer demand (everybody eats, after all), is as clear a market failure as any. It is the role of the public sector to provide the infrastructure and information for the free market to function properly. At the very base level, this means taking the appropriate policy steps to ensure that beginning farmers across America have access to the tools necessary to plant their seeds.

Perhaps the lack of government support for beginning farmers to date can be chalked up to a lack of innovation. Could it be that the government hasn’t decided on the best way to recruit 100,000 farmers? If so, they need to look no further than their own backyards for help.

Linking Local Innovation to National Policy

In communities everywhere, non-governmental organizations are stepping up to provide invaluable services, partnerships, education and community to beginning farmers. Here is a short list of inspiring programs, services and change-makers:

- **Land link services.** Linking beginning farmers to landowners is an excellent way to get beginning farmers on the land. Organizations across the country provide these services at little to no cost. Examples: the Center for Rural Affairs in Nebraska; Landlink Vermont in Vermont.

- **Technical assistance.** Knowing where to look for help is often a challenge for beginning farmers. Examples: many Land Grant Universities provide extension services to small and medium sized farms; The Northeast Organic Farm Association (NOFA) state offices.

- **Business planning and farm viability assessments.** Creating a business plan can be daunting. Many agriculture-based organizations now offer support in the form of financial planning assistance. Examples: Vermont Farm Viability Program; Intervale Foundation in Vermont.

- **Education and outreach.** Farm schools and other beginning-farmer trainings are cropping up across the nation. From one-day seminars to semester-long courses to year-long apprenticeships,

these opportunities impart important skills and help to create community among new farmers. Examples: Santa Cruz Permaculture Design Course in California; the Groundswell Center for Food and Farming in New York.

- **Farm incubators.** Opportunities to pilot a farm business can mean the difference between success and failure for beginning farmers. Often, incubators offer the opportunity to share equipment, knowledge, and labor. In urban spaces, community gardens can provide beginning farmers with helpful hands-on experience. Examples: Intervale Center in Vermont; ALBA in California; GrowNYC in New York.

- **Mobilizing the next generation.** Organizations like FoodCorps and the Greenhorns have been working hard at establishing the infrastructure to recruit, train, and support aspiring farmers. There is an increasing variety of media dedicated to the food movement. Example: www.CivilEats.com.

- **Expanding markets for regional food.** Farmers only make money if someone wants to eat their food. Farmers markets and CSAs are an excellent start, but if we want to get serious about supporting beginning farmers, we need to do a better job of ensuring market channels and physical infrastructure for small and medium-sized farms. This will require addressing planning and zoning challenges for food processing, transportation, distribution and storage at the regional

level and educating wholesale distributors and buyers on how to buy and receive foods from their local food shed.

Surely it is this type of support that has farmers like Tyler and Alicia Jones leaving the comfort of a biweekly salary and benefits for the uncharted territory of windrows and laying hens. The government would do well to take a cue from the hard work and determination of its citizenry, a small percentage of whom seem to be saying, in the face of all odds, “Come hell or high water, we are going to grow our country food.”

Although it makes me nostalgic to see young, robust farmers full of aspiration in major U.S. newspapers, what I *really* want to see is the commitment from our government to these heroes. While I fully support the “do-it-yourself” attitude embraced by America’s new generation of farmers and producers, I’m afraid they won’t succeed without some very powerful policy backing. What these young farmers need is their government to pick up a shovel and stand by their sides. ▀

(E n d n o t e s)

- 1 (National Sustainable Agriculture Coalition, 2010)
- 2 (USDA, National Institute of Food and Agriculture, 2011)
- 3 (Sumner, 2008)
- 4 (USDA, Farm Service Agency, 2011)
- 5 (Starline, 2011)
- 6 (Starline, 2011)

- 7 (Starline, 2011)
- 8 (National Sustainable Agriculture Coalition, 2011)
- 9 (National Sustainable Agriculture Coalition, 2010)
- 10 Ibid
- 11 Ibid
- 12 Ibid

(R e f e r e n c e s)

National Sustainable Agriculture Coalition. (2010, July 1). Vilsack: Farm Bill Should Emphasize Beginning Farmers . Washington, D.C, USA.

National Sustainable Agriculture Coalition. (2011, April 15). *National Sustainable Agriculture Coalition*. Retrieved May 8, 2011, from Congress Passes FY 2011 Budget, Cuts Billions from Agriculture: <http://sustainableagriculture.net/blog/congress-passes-final-fy11-cr/>

Starline, M. (2011, April 14). Testimony of Matt Starline Farmer, Starline Organics and Member, Ohio Ecological Food and Farm Association to the Subcommittee on Department Operations, Oversight, and Credit Committee on Agriculture U.S. House of Representatives at the credit oversight. Washington, DC, Virginia, USA.

Sumner, D. A. (2008). Library of Economics and Liberty. Retrieved May 8, 2011, from The Concise Encyclopaedia of Economics: Agricultural Subsidy Programs: <http://www.econlib.org/library/Enc/AgriculturalSubsidyPrograms.html>

USDA. (2009). 2007 Census of Agriculture UNITED STATES Summary and State Data. United States Department of Agriculture.

USDA. (2011, March 9). Farm Service Agency. Retrieved May 8, 2011, from Farm Loan Programs: <http://www.fsa.usda.gov/FSA/webapp?area=home&subject=fmlp&topic=landing>

USDA. (2011, April 26). National Institute of Food and Agriculture. Retrieved April 15, 2011, from Grants: <http://www.csrees.usda.gov/fo/beginningfarmerandrancher.cfm>

Anna Herforth

Nutrition Specialist at the World Bank

Interview by Christopher Coghlan

Anna Herforth attended Cornell University for undergraduate studies where she received a B.S. in Plant Science, summa cum laude in 2002. She attended the Tufts Friedman School of Nutrition Science and Policy where she completed her M.S. in Food Policy and Applied Nutrition in 2005, with a specialization in nutrition interventions. Anna returned to Cornell in 2006 and received a Ph.D. in International Nutrition in 2010. She has worked in several countries in Africa, South Asia, and Latin America. She currently holds a position at the World Bank as a Nutrition Specialist on multisectoral issues of nutrition, agriculture, and the environment.

In *The African Food System and its Interaction with Human Health and Nutrition*, you discuss the strong correlation between households with home gardens and consumption of fruits and vegetables. Would you please discuss the additional benefits that home gardens bring to families?

I think the main issue is that many smallholder farmers and rural families in sub-Saharan Africa don't have the convenience of being able to get to a market quickly, especially a market that has a wide diversity of foods. So, what happens is that they might only be able to get to a market on a weekly, or monthly, or semi-monthly basis to get their necessities. The

farmers I worked with in East Africa would often buy corn meal, salt, sugar — things they would not normally produce at home. If they only go to a market every week, two weeks, or month, they really can't provide their families with fresh vegetables except on the day that they went to the market because they also generally don't have access to refrigerators. Thus, the argument for having diversified production — which includes home gardens — is that it presents instant access to a more diverse diet than farmers may have if they have to rely completely on the market.

Do you believe there is an inherent tension between greater numbers of

home gardens and industrial food production in developing countries? Would you agree that nutrition and dietary diversity suffer when a large percentage of food comes from commercial rather than family or local sources?

I think of that issue more in terms of the food system of a place: whether the place in question depends on a large number of small producers or a few industrialized producers like we have in this country. The majority of malnourished people in sub-Saharan Africa are in smallholder farmer households, who make up the majority of the rural poor.

Often, industrial production touches them indirectly in the sense of the economy in general, food prices, and the prices they can get for the products that they sell. The food security of a smallholder farmer household will depend basically on two things: what they can produce for themselves on their own farm, and the income they can get from that production.

And when you talk about the income, you need to ask questions such as: Who in the household is controlling that income? Is the income from one large sale a year? Or, are they producing something they can sell periodically so they have a regular flow of cash? Are women able to generate income and spend it as needed (which, by the way, is usually good for nutrition)?

What are the most easily accessible foods, in terms of convenience and price? It does seem clear that greater dependence on a food system centered on industrial production is more linked to nutritional problems like obesity. Therefore, it's a very complex question, and depends on the circumstances.

In *Promotion of Traditional African Vegetables in Kenya and Tanzania*, you make reference to a 2007 World Bank review that “summarized five main pathways through which agriculture affects nutrition: home consumption, income generation, women’s empowerment, lower food prices, and national macroeconomic growth.” Would you please outline each of these paths and highlight their strengths and weaknesses in improving nutritional outcomes?

That's a big question—I can't promise to be exhaustive but I can make a couple of points. I think in past decades people had a lot of faith in using agriculture as an engine of economic growth in developing economies, which would then trickle down to affect the nutrition of all people in the nation or the region.

But I think to a large extent that has been challenged. There is a caveat to that: it is true that richer countries have, in general, lower rates of undernutrition, and undernutrition goes down as individual countries become richer. However, the

correlation is much less perfect than you would expect, which is why we say that large scale economic growth is helpful but not sufficient.

Likewise, just increasing the amount of food available without concern for nutritional quality or what kind of food is accessible, does not solve malnutrition. That is where more household level aspects come about, in terms of own food production, income generation, and the empowerment of women within the household. Those are the places where you can affect things very directly by improving the immediate access households have to food, either through what they can buy or what they can grow for themselves, and to health services. Those decisions have a lot to do with women's empowerment.

In the same piece, you also state that “three other pathways from agriculture to nutrition are apparent, but have not been emphasized in most agriculture-nutrition interventions or literature.” Would you please provide an example of one of these pathways and elaborate?

The basic idea is that agriculture and food security depend on a functional ecosystem. Intuitively, they require fertile soil, adequate water, and clean water; you have to have reliable seeds, and a diversity of seeds and species that can be productive in varying environmental conditions, especially as climate change starts to show some

effects. So, these are the ecosystem services that are the foundation for food security. They are affected by agriculture and agricultural practices, and will in turn directly affect nutrition.

The policy brief *Scaling Up Nutrition: A Framework for Action* states that there are “two complimentary approaches to reducing levels of malnourishment: direct nutrition-specific interventions and a broader multi-sector approach.” Could you please discuss each approach and comment on how they can work together successfully?

Over one hundred multilateral institutions, bilateral agencies and NGOs have endorsed the scaling up nutrition framework, so it has broad consensus amongst the nutrition community. Nutrition-specific interventions include nutrient supplements to affect micronutrient deficiency (or hidden hunger) directly, such as vitamin A supplements, and iron folic acid supplements for pregnant women to prevent anemia, or therapeutic feeding for children identified as malnourished.

Those interventions are very direct and affect specific nutrition problems. The necessary “nutrition-sensitive” policies or activities are more fundamental to good nutrition in a population, but are less direct: having good water; sanitation; sufficient food production; consistent access of all people to a sufficient diet, women's empowerment; environmental resource

management; education for all. All of these lead to good nutrition, but do not directly address a clinical problem in an individual.

So, these kinds of policies are needed in agriculture, education, water and sanitation, but there isn't a consensus so far on exactly what to do or how we can implement them, unlike nutrition-specific interventions where there is an emerging consensus. The nutrition community is really working now to try to provide a menu of options to address some of these more fundamental issues affecting malnutrition in multiple sectors. That is what I am working on at the World Bank.

***Scaling Up Nutrition* also references a 2009 study carried out for the World Bank that identified a selective package of evidence-based direct interventions to prevent and treat undernutrition. These interventions included “promoting good nutritional practices, increasing intake of vitamins and minerals with provision of micronutrients for young children and their mothers, provision of micronutrients through food fortification for all, and therapeutic feeding for malnourished children with special foods.” The policy brief suggested that these interventions would have a significant impact on the UN Millennium Development Goals. Could you please discuss how these interventions would help countries realize the goals set by the UN?**

Every intervention you just listed is a nutrition-specific intervention, which has general endorsement by the international nutrition community as actions that will help greatly. They are interventions that we know will reduce mortality, for example; they are easy targets.

However, even though we know these interventions will do something immediate to reduce malnutrition, there is not enough funding or action globally for them to be done, let alone the various nutrition-specific interventions in other sectors necessary to set the foundation for good nutrition. That's why the consensus is important: to raise awareness and secure funding from not only international aid organizations, but national governments as well.

Nutrition is fundamental for economic development and for the health of a nation, so allocating some money for these very cost effective, very cheap interventions to address malnutrition would do a great deal of good.

Which policy intervention that you work on currently that is supported by the World Bank or other international organizations do you see as potentially groundbreaking for improving nutritional outcomes?

One jumps to mind immediately: in the agriculture-nutrition connections that are now increasingly being made, the World Bank and other

development institutions are starting to focus on smallholder farmers rather than relying solely on large-scale production for food security. Another related intervention is reaching women farmers. Targeting smallholder and women farmers will reach the most vulnerable populations in general for food insecurity and nutrition, in terms of rural populations that are present in large parts of sub-Saharan Africa and other regions. So, focusing on those groups is something that will bring important changes, as it has not been emphasized as much in the past.

How did your time at Cornell prepare you for work with the World Bank? What advice would you give to young professionals who are looking to begin a career in agriculture and nutrition?

Cornell is an ideal place to begin a career in agriculture and nutrition because there are so many resources available, professors who have experience in working across boundaries, and projects in which graduate students can get involved for their thesis work.

For example, the Food Systems' *Integrative Graduate Education and Research Traineeship* (IGERT) grant allows graduate students to work on multi-sector projects for their graduate work. Groups such as FANG (the Food, Agriculture, and Nutrition Group), which I helped to create, bring students and faculty together on common issues across disciplines. So there are

many hands-on opportunities, in addition to fantastic faculty and traditions in both international agriculture and international nutrition.

That is how Cornell helped me: it exposed me to all of those things and provided me with a wonderful mentor, Cornell Institute for Public Affairs (CIPA) Core Faculty member Per Pinstруп-Andersen, who has spent his career working across boundaries in agriculture, nutrition, and poverty reduction.

I think all the opportunities for travel also prepared me to work at the World Bank where a concrete understanding of the contexts and issues in various settings around the world is extremely valuable. Students who can seek and take advantage of those opportunities will really have an advantage when they graduate and start looking for jobs in international development. ▀

Christopher Coghlan graduated from the Cornell Institute for Public Affairs with a Master of Public Administration, concentrating in Public and Nonprofit Management. He received a Bachelor of Arts from the University of Toronto in 2004 and a Master of Environmental Studies from York University in 2006. While enrolled at Cornell, Christopher took part in agriculture and environment projects in both Nepal and Switzerland.

Michael Gillenwater

Director of the Greenhouse Gas Management Institute

Interview by Hae Seung Yi

Michael Gillenwater is co-founder and executive director of the Greenhouse Gas Management Institute, a nonprofit organization that trains experts in measuring, accounting, auditing, and managing greenhouse gas (GHGs) emissions. He has dedicated his career to the development of the policies and infrastructure needed to produce highly credible environmental information that can serve as the basis for market and other compliance mechanisms, especially monitoring and verification policies and management and reporting systems for greenhouse gases and other ecosystem services. Mr. Gillenwater is currently pursuing a PhD in the Woodrow Wilson School of Public and International Affairs at Princeton University. Recently, he spoke at the Cornell Institute for Public Affairs colloquium about climate change policy and workforce needs. Cornell Institute for Public Affairs Fellow Hae Seung Yi had the opportunity to speak with Mr. Gillenwater.

On becoming involved in greenhouse gas emissions and climate change policy:

I was interested in the environment and “big picture,” complex questions. So, I went to grad school and focused on interdisciplinary topics at the intersection of science and policy. In school, I was able to work on issues related to climate change and energy policy. After graduating, I got my first job at a consulting firm in D.C. where I was tasked with creating the U.S. Greenhouse Gas Inventory Program, which was responsible for submitting

an annual report on U.S. greenhouse gas emissions to the United Nations. This was in 1995 and 1996, before the Kyoto Protocol was negotiated, and the United States had not done much work on greenhouse gas emissions measurement and reporting. In addition to working on the U.S. reporting program, I also worked with the Intergovernmental Panel on Climate Change (IPCC) and UN Framework Convention on Climate Change (UNFCCC) to develop the guidelines for how the broader international community should report its emissions.

On creating the U.S. Greenhouse Gas Inventory Program within the U.S. Environmental Protection Agency (EPA):

The purpose of national inventory programs is to report sufficient data to be used for treaty compliance purposes. Under the UNFCCC and Kyoto Protocol, developed countries must report their total GHG emissions annually and track those emissions against any targets agreed upon. The resulting report is a hybrid between a scientific and policy document because it has legal implications. The systems we put in place were codified in treaty language. Nowadays, countries in Europe and elsewhere are using the same approaches we helped develop.

On the importance of using metrics to achieve climate policy compliance, internationally and locally:

Our aim is to work towards achievable climate policy solutions. The philosophy and vision of the Greenhouse Gas Management Institute is that environmental management should be driven by metrics. Climate policy compliance issues are not the same as general environmental issues. If you want to manage something as complex as greenhouse gas and climate change, you need metrics to figure out whether the policies and technologies you are implementing are improving matters or making things worse. There are various levels working on the issue: for example, the regional level and the

international level. There are also individual companies, and their role is to aggregate their work to the international level. Whatever the level, metrics are necessary to help you understand the scale and source of the problem and to measure whether or not the changes implemented are improving the results. Without that foundation, treaty compliance is impossible.

On the need for the Greenhouse Gas Management Institute:

We formed the Greenhouse Gas Management Institute primarily because there was an emerging interdisciplinary community of technical policy experts. There were communities working on the same issues from different angles, such as Intergovernmental Panel on Climate Change (IPCC), UN negotiations, corporate carbon footprints, carbon markets, sustainable communities, and local governments. People [in the field] worked on the same issues in different sectors of the economy, but they were not communicating, collaborating, or learning from each other. Furthermore, there were no associations or degree programs to bring them all together. Thus, they were often asking the same questions, but not sharing the solutions. They were not taking advantage of each other's research, work, and findings. The Institute was created partly to create that space for networking. The idea was to find a way to bring this

technical community together and to work on professional standards and good practices. We also focused on ways to improve our work and broaden our goals in the field.

On professionalism in the Greenhouse Gas Management community:

There is a lack of defined standards and skill sets that one must have to be a carbon management professional. For example, there is a minimum set of criteria that lawyers and doctors should fit, but there is nothing similar in the greenhouse gas management area. There are consultants saying that they can analyze carbon footprints when, in reality, they might know nothing. In cases where there is carbon policy or a market where numbers are tied to financial value or regulatory compliance, we need a minimum level of confidence in those numbers to make sure there is no fraud, intentional or unintentional.

On the idea of carbon as a commodity:

This is the area of my academic research. Essentially, you are converting a public good into something that you can use as a private good. The key example everyone points to is the Acid Rain Program in the United States where we commoditized the pollution that causes acid rain and then allowed trading. It is a question of design. It does not mean that you can commoditize anything, trade it in any way, and that it will work.

There are serious policy-design and market-design issues to make sure the policy achieves what you want it to achieve. Greenhouse gas emissions are ideal to commoditize in that they are a global public good, so it does not really matter where they are emitted. Therefore, it is more easily commoditized given that it is fungible across time and space. Similarly, there is not one technical solution. If we knew one magical solution we wouldn't need a market. However, since there is not one magical solution, we can use the creativity of a market mechanism to find the most cost-effective solutions and to promote innovation.

On the viability of a global market for carbon trade:

It is probably not fair to call it one market. Right now, the global carbon market is a creation of policy because carbon is not a natural private good. Thus, the form and character of the commodity changes with policy decisions and policy decisions are not globally uniform. If you define *viable* by whether it is possible, this is already happening now, so it is achievable. Whether it is an optimal solution is a different question. There are strengths and weaknesses in the use of market mechanisms to address environmental problems. More importantly, there is no single policy option that will solve all environmental problems for every sector and every industry. Carbon tax may be appropriate for certain industries, cap

and trade might be for others, and direct regulation would definitely be the solution for other places where we can just install equipment at a low cost that controls emissions.

Some thoughts on voluntary greenhouse gas reduction programs:

It is hard to come up with too many environmental problem examples that have been solved from a voluntary approach. It is probably impossible to come up with any *global* environmental problem that has been solved by a voluntary approach. Therefore, to ask what impact a voluntary carbon market would have is almost a rhetorical question to ask. Can you solve a serious problem with a voluntary approach? The obvious answer is no. If you could, greenhouse gases would not be the serious problem we are talking about now. However, there is a role for voluntary approaches. Voluntary markets probably help some companies to innovate, learn, and experiment with the approaches, methodologies, and technologies, which has an educational value. There are other kinds of voluntary approaches that have an impact, like educational programs and labeling programs. However, they are somewhat unrealistic to solve the “big picture” problem.

Many experts say there are currently no clear standards in the world for reporting carbon footprints. However, more and more businesses claim to

have reduced their carbon footprints. How meaningful are these claims?

There are standards for what we typically call Corporate Emission Inventories, which are more appropriately defined by geography, physical manifestation, and organizational boundaries. A company is a typical example of an entity, but it could be a conference, an individual person, or a nonprofit organization.

One of the two main standards is the Greenhouse Gas Protocol, from the World Resources Institute and World Business Council for Sustainable Development. Technically the GHG Protocol is not a standard, but it is guidance on how to do an inventory. It provides guidance but not detailed requirements that are auditable. The second standard is ISO 14064 Part 1, which provides auditable requirements but only at a high level, and therefore lacks technical details, which are left open to interpretation.

The more important question might be why companies do it. I think the obvious reason is that they want to appear green to their stakeholders, customers, and employees. Some corporate managers also want to understand their risks with respect to climate change. However, there is a common misunderstanding that their corporate carbon footprint will provide them an accurate picture of their regulatory risk. Companies merge, divest, and are

dynamic and social artifacts. If you are trying to track performance over time using metrics and your target is constantly morphing, shifting, and changing, it is probably not the most effective target for tracking compliance. Therefore, regulatory programs almost never focus on corporate emissions. Instead they focus on emissions from individual sources (such as facilities) and regulate them. Unfortunately, corporate carbon footprints rarely give a realistic picture of a company's regulatory risk with respect to GHG regulation.

What are some current factors complicating accurate carbon-trading reporting?

The main impediment to the growth of carbon markets right now is a lack of policy and political consensus. Many people do not understand that the current voluntary carbon markets are largely driven by what we call *pre-compliance*, so people are doing things voluntarily in the anticipation that they will get credit for it under regulations later on.

As policymakers begin to design future climate change legislation, what would you urge them to consider in developing and implementing these policies?

High-level design work has been done through negotiations at the international, national, and regional levels. We did cap and trade programs

here [in the United States] but that was narrowly looking at a limited population of large power plants. However, Europe has taken that a step further by including power plants and many industries. Since Europe is not one united country, they had to deal with the integration across jurisdictions. In the United States, we have had the Regional Greenhouse Gas Initiative in the Northeast, which is currently up and running. It focuses narrowly on power plants, but has provided a lot of lessons learned. California is now moving on design and implementation of its own cap-and-trade system. Plus, a lot of work was done on Capitol Hill during the debates over federal cap and trade legislation. From this standpoint, the high-level design issues have largely been addressed, but there are still many details to explore, especially if we are looking at including more than just power plants. Different kinds of industries have different costs, issues, and cultures that must be considered. This will bring some challenges, but it is not something we cannot overcome if we learn as we go. ▀

Hae Seung Yi is a first-year Master of Public Administration fellow pursuing a concentration in Environmental Policy at Cornell University. She received a Bachelor of Arts in Consumer Science and Human Development from Ewha Womans University in 2008.

S u b m i s s i o n G u i d l i n e s

We solicit contributions for consideration with a view to publication. *The Cornell Policy Review* is the public policy journal of the Cornell Institute for Public Affairs (CIPA). We are a student-run, non-partisan journal dedicated to publishing interdisciplinary work that focuses on a range of political, social, economic, and environmental policymaking issues. *The Review* welcomes submissions that will advance the journal's mission to showcase critical work shaping the body of knowledge of policymaking and administration issues in the years to come. Submissions should present a well-supported point of view and offer provocative policy recommendations.

Article submissions should range from 5,000 to 7,000 words and must include a 100-word abstract. Commentary submissions should run roughly 3,000 to 5,000 words. Work must be original and unpublished. Citations must be formatted as endnotes according to the Chicago Manual of Style. All text must be double-spaced and submitted with Times New Roman font size 12. A cover letter should include the author's name, address, e-mail address and phone number.

Please submit one (1) electronic copy in Microsoft Word (.doc) format to email: thereview@cornell.edu

The views expressed in the contributions which appear in *The Cornell Policy Review* are those of the individual authors and are not necessarily those of the journal, the editors, or the Cornell Institute for Public Affairs.

Cornell Institute for Public Affairs

A Graduate M.P.A. Program

Cornell University

294 Caldwell Hall

Ithaca, NY 14853

phone: 607-255-8018

fax: 607-255-5240

thereview@cornell.edu

www.the-review.cipa.cornell.edu

©2011 Cornell Institute for Public Affairs

