

RISE

RESEARCH ON IMPROVING
SYSTEMS OF EDUCATION

WORKING PAPER
March 2019

Creative Destruction or Idiot Winds: Schumpeterian Theory Meets the Educational Sector in Developing Countries

Mark H. Moore

RISE-WP-19/029



Funded by:



BILL & MELINDA
GATES foundation

Creative Destruction or Idiot Winds:

Schumpeterian Theory Meets the Educational Sector in Developing Countries

Mark H. Moore

March, 2019

Table of Contents

The Challenge: Imagining a System that Can Generate Steady Productivity Gains Through Innovations

Innovations Small and Big: Micro Operational Change v. Macro Institutional Change

Innovators, Innovations and Innovativeness

How Much Flex (Discretion) Should We Allow in the Five Fold Delegation of National Purpose?

Two Big Ideas About Creating System Wide Learning

The Government-Structured, Centralized Research and Development Model (GSCRD)

Embracing a Social Point of View: Valuing Both Individual and System Level Outcomes

*Government as the **Embodiment** or the **Agent** of a Proper Social Point of View?*

Functional Design Criteria for the Government Supported Centralized R and D System

A Critique

The Power of the Status Quo and Institutional Mimesis

Why the Status Quo and Institutional Mimesis are Particularly Powerful in the Public Sector

Critical Functions and Potential Weaknesses in the GSCRD System

The Consumer-Dominated, Highly Decentralized, Market Driven Model (CDHDMD)

The Privatization of the Educational Production and Consumption System

A Quick Functional Comparison of the Two Systems

A Critique

Pure Privatization

Marketization

Individualization

The Way Forward in Analyzing National Educational Systems

A Quick Review of the Character of a National Educational Systems

Centralized Command and Control v. Decentralized Markets

Public and Private Aspects of a National Educational System

A Mixed Public/Private Social Production System

Principles to Guide the Analysis

Principle 1: *The National Education System is the Proper Unit of Analysis for Results, Performance, and Intervention*

Principle 2: *The Performance of the National Education System Should be Judged at Both the Individual and Aggregate Level, and in both Utilitarian and Justice Terms*

Principle 3: *Recognizing and Valuing Variation in the System*

Principle 4: *Ensuring a Diverse and Strategically Valuable Set of Innovations for Testing*

Principle 5: *Organizing the Demand Side of the Educational System to Distinguish Valuable Innovations from the Fads, and to Scale the Valuable Efforts at the Expense of the Less Valuable*

The Simple Analytics of Innovation and Learning in Complex Social Production Systems

Some Different Examples of National Level Social Production Systems Encouraging Innovation in Mixed Systems

Federalism as the Laboratory of Democracy

Land Grant Universities and the Development of American Agriculture and Mining

The Accumulation of Knowledge Through Reporting on the Effect of Specific Medical Protocols

Social Entrepreneurship and Large-Scale Philanthropy

Building a Professional Movement for Community Policing

Summary and Conclusion

The Challenge: Imagining a System that Can Generate Steady Productivity Gains Through Innovations

The basic theoretical and practical issue facing the RISE initiative is to imagine and test a national level educational policy intervention that can produce steady productivity gains in the educational sectors of developing countries. (RISE, Website)

That goal is very ambitious -- one that extends over many billions of individual learners, tens of millions of educational providers, and draws on assets and capacities from all three sectors of a society -- the government sector, the voluntary sector, and the commercial sector. It is also a goal that is animated and guided by many different social purposes, measured in many different ways. And while the urgency of achieving the varied goals is present and compelling now, it will take many years and much trial and error to achieve them.

The important question is how we can best continue to make progress, and accelerate the rate of learning.

At the outset, one should note that progress has already been made in terms of expanding the *accessibility* of educational services to children throughout the developing world. But, as RISE researchers have shown, much less progress has been made in improving the *quality and impact* of those educational services on those the system now reaches. (Pritchett, 2018) We have achieved a certain scale, but not the *quality at scale* that can help to improve the individual and social well-being of the next generation of children growing up in developing societies.

The question before us, then, is what do we know (or more likely, what hypotheses should we entertain) about the methods that can be used to sustain increases in accessibility, while dramatically improving quality and impact.

We start with a big assumption: namely, that important productivity gains in the educational systems of developing countries will not be solved simply by increasing the *scale* of resources committed to the task. Additional resources are always welcome, of course, and, all other things being equal, might produce improved educational *impact* as well as wider *access*.

But the fact of the matter is that much greater national spending on educational services does not seem to have much improved desired educational outcomes. (Pritchett, 2018) This suggests that little improvement can be made until we find methods that can improve the productivity and quality of educational services. That, in turn, suggest that we need to innovate widely and quickly to find better ways of providing educational services to produce better educational outcomes.

But how many, and what kind, of innovations are we looking for?

- Do the important innovations focus on new methods of instruction – perhaps particularly those that take advantage of digital technology?
- Or, would it be important to develop cheaper, more precise, and quicker measures of individual student development so that instruction could be more tailored to individual student learning trajectories?

- Or, perhaps it would matter a lot if we found better ways to engage the support of parents and peers in the educational process of particular students?
- Or, it could be that what is needed are new ways to recruit, develop, motivate, and compensate the individuals who take on the arduous task of teaching?
- Or, it might be that new managerial processes could be developed that could be used by school leaders to organizational cultures committed to teaching and learning – not only among the students, but among the teachers?
- Or, perhaps it would be important to change the form of accountability now used to finance, manage, control, and evaluate public school systems that would cause the public schools to be more consistent and energetic in doing their routine work; quicker to embrace and adopt practices that differ from theirs but have been shown to produce better results elsewhere; and more creative on their own in seeking to find better ways to educate.
- Or, maybe the key is to re-shape the entire sector by re-allocating the overall social effort across the different educational suppliers now distributed across the public, nonprofit, and commercial sectors?

The wide range of possibilities suggested above could be seen as a somewhat arbitrary list of possibilities. But each of the broad possibilities suggested above has, in fact, been proposed as the panacea for improving educational performance.

Furthermore, a close reader might have noticed that the possibilities are not listed entirely arbitrarily; they are arrayed in a particular order. The order moves:

- *from* the most concrete and particular (but enormously widespread) activity that involves transactions between students and teachers in the presence of a curriculum presented through a particular pedagogy;
- *through* the (equally particular but equally ubiquitous) intimate influences brought to bear on a particular student's chances to learn by siblings, parents, peers, and relatives;
- *back* to the socially or governmentally organized systems that creates and distributes a pool of teachers that end up standing in front of classrooms;
- *up* to the acknowledged influence of particular school leaders on how all the elements described so far have been combined and operate in a particular school;
- *up* to the systems of public accountability that are used to animate, guide, and evaluate schools and teachers; and
- *up and out* to the wider society of educational suppliers who provide educational services outside the direct management control of government, and sometimes without any government

funding, to those who wish the particular kind of education they offer, and are willing to volunteer or pay for that particular education out of their own time and pocket books.

Faced with this daunting array of possible categories of innovations (each embodying hundreds, if not thousands of even more particular possibilities), it is hard to know exactly how to proceed -- to find and make best use of the particular innovations that could define the path towards improved educational performance at the national level. Yet, that is precisely the task that faces us.

Two points seem important at the outset.

Innovations Small and Big: Micro Operational Change v. Macro Institutional Change

First, it is probably important to embrace the wide set of possibilities that exist for improving the performance of national educational systems suggested by the list above. Since there is no particular reason to exclude or to home in on one particular kind of innovation, and since they all seem to be “on the table” for discussion, we might as well consider them all.

To make our task slightly simpler, we could make one crude but important distinction: that between “*micro operational innovations*” on one hand, and “*macro institutional innovations*,” on the other. The set of micro-operational innovations would include those that occur within smaller social institutions such as individual schools or even classrooms that affect the basic processes they use to promote educational goals – for example, the adoption of a new pedagogy for teaching reading to young students, or a new way to engage parents in their children’s education, or a new way to test the development of problem-solving skills among adolescents. The set of macro- operational innovations, in contrast, would include those that happen within large social institutions and involve changes in the large operational processes those large institutions rely on to accomplish their tasks – for example, the processes of certifying individuals to become teachers; or changes in national financial support or evaluation of the performance of public, non-profit, and commercial schools. Table 1 shows the rough results of this effort below.

Table 1: A Catalogue of Innovations

	Micro Innovations	Macro Innovations
Classroom Level Curriculum and Pedagogy Continuous, Personalized Measurement Classroom Discipline/Management	Smaller, Operational Innovations	Diffusion Across System Through Some Process
School Level Parental/Peer Engagement Teacher Selection/Motivation/Evaluation School Leadership, Management, Governance	Larger Innovations that Include Managerial Changes at Org. Level	Diffusion Across System Through Some Process
National Level Teacher Development Systems Financing/Monitoring Systems Curriculum Requirements and Certifications	Even Larger Innovations that Include System Re-Structuring and Financing	No Diffusion Since Refers to Whole System

One important result of making this simple distinction is to see that some of the proposed innovations can be tested relatively quickly and easily because they are small, relatively easy to implement, and produce results that show up relatively quickly.

This is not to say that the aggregate value of these innovations could not be large. If the small, operational innovations prove to work for some purposes in some circumstances; if those purposes and circumstances are widespread in the system; and if means are found to diffuse these innovations rapidly across the system; the impact on system level performance can be very important.

Other innovations, however, involve both a great deal of money, time, and risk to implement, and cannot be easily divided into bits that can reduce the wide uncertainty about the likely effects of the larger scale, more institutionally complex innovations.

For example, at the limit, it is hard to know how one could experiment with wholly different national level systems for financing, organizing, and evaluating educational systems -- partly because the experiment would be so large, but also because there is only one site where the experiment can take place. One could, of course, take advantage of international or historical comparisons of different national educational systems. Moreover, federalist systems allow for state level variation in national systems. Finally, one could make some marginal changes in particular operational or administrative features of a national systems and observe the net effect.

But the point is that these efforts are of a different kind than smaller scale experiments with the micro operational processes that can produce improved learning of different kinds, in different subjects, for different age groups.

Innovators, Innovations and Innovativeness

Second, as one goes through this exercise, reaching for larger, more aggregate institutions encompassing larger populations, more learning objectives, and more variety in the particular things they have to keep in motion to produce the desired results, it seems that our approach to innovation seems to change. One becomes less interested in *particular operational innovations* related to the intimate processes of learning, and more interested in *finding, developing and encouraging innovators* on one hand, and *creating institutional frameworks and processes* in which individuals who retain responsibility for that effort, and play central roles in producing it, can feel free to experiment.

Table 2: Innovators, Innovations, and Innovativeness

	Substantive Innovations in Processes that Produce Learning	Developing and Encouraging Innovators	Create Institutional Frameworks That Allow or Promote Innovativeness
Classroom Level Curriculum and Pedagogy Continuous, Personalized Measurement Classroom Discipline/Management	Innovations in Classroom Methods	Find and Support Innovative Teachers	Innovative and Adaptive Teachers
School Level Parental/Peer Engagement Teacher Selection/Motivation/Evaluation School Leadership, Management, Governance	Innovations in School Level Strategy and Leadership	Find and Support School Leaders Who are Willing to Experiment	Creating Schools that Can Learn
National Level Teacher Development Systems Financing/Monitoring Systems Curriculum Requirements and Certifications Research, Development and Evaluation	Innovations in National Systems	Find and Support Political Officials Willing to Change Education Policy	Creating a National System that Can Learn

Of course, the freedom to experiment comes with a cost. Those who seek to innovate at any level of the system (classroom, school, national policy), and in any kind of innovation (substantive processes of teaching and learning, organizational forms and cultures that encourage innovativeness and learn from it) have to recognize that they are, in fact, experimenting. They do not know the results for sure until they try it.

And that imposes a burden on them to ensure that the reasoning and evidence that justifies the experiment is sound. Perhaps even more importantly, the experimenters have an obligation to *pay attention to what happens in their experiments, and to report the results to others who are experimenting in similar areas*. In short, we have to have system level processes that have two key properties: 1) they encourage not only *innovations* in all these different domains, but also *innovators, and innovativeness* at all levels of the system; and 2) they have the capacity to capture and accumulate the results of the experiments that are undertaken.

How Much Flex (Discretion) Should We Allow in Five Fold Delegation of National Purpose

An important implication of this simple analysis is that we might have to think about how to adapt the “five-fold model of delegation” to allow a bit more *flex* in the system to accommodate two important features of a national educational system that are both empirically and normatively important. (Pritchett, 2015)

First, one must remember that the “principals” who pay for, regulate, and arbitrate the value of the educational system occupy different social and institutional positions. On one hand, there are the citizens, taxpayers and their elected representatives; on the other hand, there are the customers or clients of the system, and on the third hand (!) that are those who organize and produce the educational services as they are delivered to participating students. Each of these “principals” claims a right to define what constitutes a good and just educational system, and is in a position to influence what is actually produced and consumed by the system at individual student levels, and what impact that level and distribution of consumption has on aggregate social conditions. (Pritchett, 2017)

Second, one must also remember that those who are the “agents” of the system – those who are supposed to act in accord with the preferences of the principal -- *have and will use both the de jure and de facto discretion they have as agents to undertake more or less well intentioned efforts to improve educational performance -- defined as they understand the goals of the educational system, and the actions that they think will produce those results*. Their judgments both as to ends and means, values and practices, may well differ from those held by other actors in the system whom we had somewhat arbitrarily designated as “principals.”

Of course, in order to create more *flex* in the system to accommodate different ideas about the values that justify educational efforts, the best methods for producing that value, and the social location of real expertise in educational policy and programs, a system designer and manager runs the risk of undermining the discipline, accountability and control that could be relied upon to produce reliable (or better still, excellent) performance. (Pritchett, 2015) But greater flex also offers the advantage of producing some natural or planned variation in practices at different levels of the system that could produce improved performance via several different routes: first, a greater capacity to adapt educational goals and methods to individual, or group, or local jurisdiction characteristics, and therefore produce both greater satisfaction with the responsiveness of the system to the preferences of different

principals; or 2) a wider exploration of methods that might be valuable not only within particular niches in the system, but also for the overall or median conditions on the system.

This observation sets out the what often seems to be a fundamental tension between the idea of ensuring excellent performance in the short run through strict forms of accountability for performance on one hand, and ensuring even more excellent performance in the future through institutional structures and processes that not only tolerate, but encourage departures from existing practices in the expectation that we can find better ways of performing in the future. The trick seems to be to set up some kind of system that can be highly disciplined not only for performance in the short run (relying heavily on existing practices), but also highly disciplined in the search for and exploitation of improved methods of teaching in classrooms, running schools, and organizing national level systems for financing, producing, and evaluating national school systems. We need not only disciplined performance, but disciplined *learning to improve performance*. (Pritchett, 2015)

Two Big Ideas About Creating System Wide Learning

A useful way to start thinking about the practical challenging of developing a national educational system that can learn to improve its performance (with a little help from RISE!) is to reflect on two quite distinct ideas about the institutions and processes that could cause a large, multi-sector social production system to improve its performance through a process that encourages wide-spread innovation, fast learning, and the rapid diffusion of the better ideas across the national production system. One will describe as the “government supported, centralized research and development model.” The other we will describe as the “consumer dominated market model.”

Each of these has its strengths, and each its weaknesses. Each has its fervent supporters and each its critics. The aim in this paper is to help us imagine a combined approach that would allow us to take advantage of the strengths and avoid the weaknesses of each approach.

The method is to describe the key features of the two systems, the critiques of the two systems, followed by a modest effort to think through both the principles and the concrete structures and processes we should use to build a national education system that can learn not only how to perform better, but also to understand better than they now do what they mean by a better, more just system.

The Government-Structured, Centralized Research and Development Model (GSCRD)

On one hand, we have the model of a more or less centrally guided process that:

- 1) is in a good position to define what progress and improved performance would mean for the system as a whole;
- 2) has gathered and continues to gather accurate information about the macro performance of the sector in these terms;
- 3) provides financial support and social authorization for potentially valuable innovations in educational practices, and has developed a central system for gathering accurate information about the myriad of innovations being undertaken with or without central financing or approval, and enabled the development of reliable empirical evidence about the degree to which those innovations “worked” to achieve their desired results;

- 4) has the means for encouraging the fast, widespread adoption of the methods that seem to “work” to produce valuable educational results in specific domains;
- 5) and can speed the adoption of good methods in both absolute and relative terms by having the capacity to divert resources from processes that are cost-ineffective to those that are more cost-effective.

Embracing a Social Point of View: Valuing Both Individual and System Level Outcomes

Note that I describe this as a more or less centrally guided process primarily because the model seems to assume the existence of at least *a perspective* within a society, perhaps a *particular institution*, that embraces a *national* definition of a high performing educational system taken as a whole, and evaluates the performance of the whole system from this particular perspective.

By definition, that perspective can see and evaluate the impact of the system from two different points of view. On one hand, it can *view the performance of the system from the point of view of the principal individual beneficiaries of the system* (students and their parents). It can ask and answer the question of whether the educational system is delivering the educational services to students and parents that they *want*, that they believe they *need* and *deserve*, and that will produce the short and long term results they *value*.

On the other, the national perspective can *also embrace the wider evaluative frame that includes social and public aims that are not fully captured by the individual satisfactions and benefits delivered to individual students and their families*. For example, to the extent that government is paying the financial costs of the educational system, a social or public perspective would note the impact of the system on government budgets and taxpayer burdens.

Beyond the financial burden of the system on public finances, a social or public perspective could include an evaluation of the extent to which the educational system as a whole helped to achieve aggregate social goals such as economic prosperity, or greater economic, social, or political opportunity for all citizens including those are now poor and marginalized.

In short, to the degree that the national educational system is seen within a society or a polity as a key institution in a society that affects not only individual welfare and opportunity, but also the future productivity, sociability, and political stability of the country as a whole, the society as a whole might want to weigh in on the question of how the educational system as a whole ought to operate as well as whether it was delivering services desired and used by individuals for their own purposes. (Moore, 2015)

Economists often refer to the perspective I am describing above as a “social point of view.” (Stiglitz and Rosengard, 2015 169-174). They do so to distinguish it from the point of view of the “sovereign, individual consumer.” To suggest that some “social point of view” exists that should be decisive in evaluating the performance of large social institutions such as national educational systems, is to make a significant exception to the usual assumption made in economic and liberal political theory; namely, that individuals are the best or only appropriate arbiter of value in societies.

Yet, embracing this perspective – accepting the idea that it might be important to imagine that there is a *collective* arbiter of the value of education as well as the individual judgements made by the

beneficiaries of the system – seems critical when a society addresses the important question of how the level and distribution of consumption of some things that might colloquially be called “social” or “public” goods and services should be shaped by public policy.

One can easily argue that education can and should be seen as a *public* as well as a *private* good – not because educational services are non-excludable and non-rival (which is certainly not true of education), nor just because education has some important positive externalities for other individuals (which education certainly does have), but also because the public value of education registers in the parts of individual and social life that are not strictly economic – in the quality of our individual cultural lives, and in the quality of our civic and political life as well. Finally, education can be seen as a public good in that it is one of the key instruments that societies use to promote equity – particularly across social groups, and inter-generationally which is viewed as both a good in itself, and something that contributes to wider social well-being and justice. (Stiglitz and Rosengard, 2015)

If education is an important public good (in the sense that it produces aggregate as well as individual results, and is valued by an aggregate group rather than just the individuals who receive or do not receive the good), it should be clear that the performance of the system as a whole should be judged “from a social point of view” – from the point of view of a social or public arbiter of value who has defined a social utility function that should provide guidance in evaluating the performance of the social system and that could *include*, but is not *limited* to the satisfaction that individual consumers of educational services derive from that experience. (Moore, 2014)

*Government as the **Embodiment** or the **Agent** of a Proper Social Point of View?*

Often, the government, acting more or less reliably as the agent of the citizens of a polity, is seen as the appropriate arbiter of the public value – particularly if that value is being produced under the guidance of government regulatory authority, and with the help of government money. But, since we often have to worry about the responsiveness of government to its citizens – its ability to call into existence a public that understand and act on its own interests – we worry that the “revealed” social utility function that actually guides government policy will not be the right one. (Moore and Fung, 2012)

To escape both the messy world of real politics, and to establish a “proper” utility function that we can use to measure the real value of a given national educational system, we often invoke the idea of a “benign dictator;” or as a close substitute, a democratic government that is being advised by knowledgeable, conscientious, and well-meaning experts. In a world in which we are bound to one another through our practical ability to help or hurt one another, through some degree of fellow-feeling and shared norms that define our rights and responsibilities to one another and motivate us to live in accord with those rules, and by the fact that we share a government that acts simultaneously as a guarantor of our rights, the enforcer of our social duties, and an important creator of the economic, social, and political conditions in which we live, it is essential that we have some collective capacity to decide what we would like to guarantee to one another, and accomplish together as well as to know what each of us likes, think we deserve, and are willing to contribute.

Functional Design Criteria for the Government Supported Centralized R and D System

This establishes the following design requirements for a national educational system that can produce the disciplined process of innovation and learning that could, in principle at least, produce a continuously improving national educational system, when evaluated against national purposes:

- 1) *If* some social perspective on education can be constructed that defines the socially and publicly (as well as individually) valued ends of education;
- 2) *And if* those who can embrace and act in accord with that perspective are in a position to know a great deal about what is currently working and what is not with respect to those goals;
- 3) *And if* they have some capacity to spot and suggest promising new innovations that could improve performance, and if they can learn quickly whether they are right or not;
- 4) *And if* they can divert resources from practices that are inferior to those that have been newly developed and tested;
- 5) *Then* that perspective, held and pursued by some group that embodied that perspective would be in a good position to animate and guide a process of steady productivity gains.

It is this idea – the idea that society – guided by a centralized intelligence that defined the purposes of the educational system, understood a great deal about the effectiveness of its current practices measured against those standards; could imagine, stimulate, and evaluate important innovations; and help to scale the effective and shrink the ineffective – that encourages many interested reformers in developing and using the government as a kind of venture capital fund for educational improvements. On this view, it is government (aided, perhaps, by a mobilized and focused social science or applied research community) that could develop the perspective, the knowledge, and the resources to animate and guide improvements in educational practices.

A Critique

Unfortunately, this idea of how best to organize a continuously learning national educational systems has a key institutional vulnerability: it is vulnerable to capture by forces that could *prevent* rather than *encourage* innovation and learning.

This should not necessarily be the case. We ought to be able to develop a rational approach to improving the performance of the educational system. In principle, all we have to do is to define what constitutes the goals of the national educational system, develop measures to determine the degree to which those goals are being achieved by the existing system, identify shortfalls in the national level performance, and imagine and test alternative ways to improve our performance by making changes in substantive operations or in organization and management at different levels of the system. That approach would simultaneously allow us both to challenge the status quo, and find ways to improve it.

And yet, one of the most important and surprising features of complex social production systems is that they do not easily change in response to changing conditions, or new goals, or new technical opportunities. The question is why?

The Power of the Status Quo and Institutional Mimesis

Machiavelli offered one explanation. On his view, the status quo acquires many supporters and friends. Because individual suppliers are supported in the current activities, and they would prefer not to face the trouble and risk of change, there is little drive to experiment and change. Because current demanders have become accustomed to what they are currently getting, and either cannot imagine anything better, or worry that any change might be worse for them than what they are currently getting, there is no pressure or urgency on the suppliers to change. As a result, there is nothing that encourages or forces a change in what the system is producing, who is consuming it, or how the product of the system is being produced.

This is surely part of the explanation for the surprising power of the status quo. But the second part of the explanation for the power of the status quo was provided by sociologists Paul Dimaggio and Walter Powell. (Dimaggio and Powell, 1983) They observed an important empirical regularity in the world: organizations operating in what they called a specific “organizational field” came to look a great deal like on another in many aspects of their structure, conduct and performance. This phenomenon – which they called “institutional mimesis” – seemed to be present in all substantive fields and all sectors – commercial, non-profit, and government. They argued convincingly that the surprising homogeneity among firms in any given organizational field was generated by not just by the social and political power of the status quo, but by the motivations and calculations of those managing the firms. They argued that even in commercial industries, the managers of producing firms and organizations were motivated less by the desire to produce results measured in financial terms, and more by a desire to be seen as “legitimate” in their industry and their society.

The commitment to “legitimacy” was not driven by the intrinsic value of acting legitimately, but more by instrumental values that viewed legitimacy as a useful means to the end of survival and success. If they were legitimate in the eyes of society, commercial firms could more easily raise money, hire workers, and sell their products. (Note how this concept helps explain why some firms might be particularly interested in corporate social responsibility – as an idea that helps them maintain or expand their social legitimacy, and with that secure a more solid “license to operate” with some degree of respect and freedom from criticism and close oversight by the society at large. (Moir, 2001))

And the easiest way to maintain their legitimacy, of course, was to look as much like everyone else in their industry as they could. They might need some small ways of differentiating themselves in the products and services they offered to deal with competitive pressures (e.g., a brand). But to no small degree, it was in their interests to mute these competitive pressures, and to try to look like everyone else. That made less work all around: they did not have to invent much that was new, didn’t have to run the operational and market risks of trying something new, didn’t have to think too much about problems that had not yet appeared.

This theory was developed primarily to explain why it was that commercial firms in given industries tended to look the same along many different dimensions that described their activities: the products and services they produced (which defined the industries); the organizational structures and systems they used to produce these products and services, the materials and production processes they used to produce their products and services.

Economists, of course, had their own explanation for why the firms in a given industry ultimately came to look like one another. Their account was that competitive pressures to claim market share and increase profits forced every firm to find the efficient organizational and operational means for producing the particular good and service. They were all forced out to what economists called the production possibility frontier, and there they settled with the one best method for producing the product or services that defined the industry.

That answer was good in theory, but it could not explain in practice why it seemed that *many commercial enterprises seemed to be operating well inside the production possibility frontier* – in a realm where they could improve their performance on many or even all dimensions of performance without necessarily having to increase costs. (Garvin, 1988) Every time established industries faced a competitive challenge (which was rarer than we thought because the challenge had to be at the industry level rather than the firm level), it turned out that the established firms could find better ways of producing the products and services they had on offer. That fact made the hypothesis that established commercial firms pursued legitimacy within an industry rather than performance seem plausible.

Why the Status Quo and Institutional Mimesis are Particularly Powerful in the Public Sector

If the drive for legitimacy was decisive in shaping the conduct and performance of commercial firms in a given industry -- even when they had very good measures of their financial performance, and even when there were powerful competitive pressures on them to keep improving those financial measures of performance -- then how much more powerful would these forces be in the public or voluntary sector where the measures of performance (at both individual client and social levels) were less well developed, and the pressures forcing them to hit performance targets much weaker?

The answer to that rhetorical question is a scary one: *it seems quite possible that many firms in social or public sector production systems would be driven much more by concerns about legitimacy than real, demonstrated performance with respect to the values held by their "customers", or to those held by the third parties who were often providing the funds to achieve desired social results above the aim of satisfying the desires of their customers.*

Think also about the dangers in such a world of defining some particular activities as "best practices". This designation might be fine if we really knew them to be best practices (at both individual and social levels).

But even if that were true, such designations might stop all further inquiry, and encourage the homogenization (standardization!) of activities and outputs in the social sector, and prevent both adaptation to different client populations, and the search for better, more robust methods that could work better across all clients, customers, and local social preferences. If we were not sure that these methods worked but only guessed that they did, then the designation of best practices might lock an entire social production system into mediocre performance for many years.

The plausible claim that the managers of producing firms in all sectors, but particularly those in the public and nonprofit sector might seek to pursue legitimacy rather than real performance has enormous significance for the likely impact of the government managed, central research and development system on generating improvements in the national educational system. The reason is that such a system would be unsurpassed in terms of its ability to establish what practices in the educational

system could be viewed as legitimate and which suspect. Once one had some system that was empowered to establish the important purposes of the educational system at the individual and social level, to evaluate performance in those terms, to encourage innovations and experiments that could plausibly improve performance, to judge whether the innovations and experiments were successful or not, and to encourage the adoption of the new and the abandonment of the old, one has essentially created a system that has a monopoly on legitimacy as well as performance. The system has the standing to define public value in education, and to say what practices are consistent with producing that value, and, either implicitly or explicitly, to define the legitimacy of any educational provider in the system.

Such a system would have a great deal of power to influence the practices of national educational system even though that system consisted of many different educational suppliers, users, and evaluators in different positions. Indeed, in a system where things seemed undisciplined, unfocused, indifferent to results, and out of control, it would be reassuring to think that we could organize the complex system through a process that united government with professionalism and with science to make steady progress while preventing frauds from entering the production system. As long as the coalition of government, professionals and science could be relied upon to act for the overall public good using the best available knowledge even as we kept testing and searching for better, that system could work as desired.

But it should also be obvious that if this system ever became dominated by the existing status quo, and the powers of institutional mimesis, it could become a significant obstacle to change. Instead of challenging the status quo, it would support it. Instead of testing it, it would keep certifying it. Etc. (Rolleston, 2016)

Critical Functions and Potential Weaknesses in the GSCRD System

Naturally, this puts a great deal of pressure on the imagination, integrity, accuracy, and speed on the parts of the system that are actively working on evaluating and improving the system rather than supporting the status quo. This, after all, is the part of the system that constitutes the “growth plate” for the system as a whole, and will improve its future.

But that implies that the dynamic part of the system has to be the boldest part, and to take on the biggest and most stubborn problems in the national educational system. And it is here that this system might have the greatest problems.

- 1) It might not be bold enough in taking on the largest institutional and performance problems facing the system (e.g. ensuring a minimum quality of performance across the system as a whole; finding effective means for reducing large, persistent differences in academic achievement associated with race, economic class, and geographic location; successfully integrating immigrant populations; developing an adequate response to persistent educational achievement differences across race, class; etc.
- 2) It might not have enough standing or knowledge to have an impact on these big problems (the social and political support/demand for educational performance might be too weak or too spotty to allow sustained, significant pressures to improve across the system as a whole; there

may be many problems in promoting learning across a heterogeneous population that we simply do not yet know how to solve)

- 3) It might be too slow in developing the certain knowledge that could provide some part of the power and influence those examining the potential for change could make (increased knowledge about what things work to improve educational performance is a key asset to the innovators making change, and its production a key goal of the GSCRD system, but its methods for determining what works may be too expensive and too slow to produce reliable knowledge)

It follows then, that the challenge of making the GSCRD model of system change work is to find some means to ensure that the part of the system that seeks to encourage, guide, and develop ideas for change can stay focused on the kinds of changes that could be developed and vetted at reasonable speed, but would have a large impact on the performance of the system at a social level, and create a high sustained rate of innovativeness across the system as a whole.

The Consumer-Dominated, Highly Decentralized, Market Driven Model (CDHDMD)

The second big idea about the best way to get steady productivity gains in a particular industry or organizational field is one that relies much less on some government supported centrally guided process, and much more on highly decentralized market-like processes to develop improved practices in a field, test them for value, and re-distribute resources from those practices that ineffective to those that are effective. The key ideas for this model were developed by the economist Joseph Schumpeter. (Schumpeter, 2010)

On this view, what drives the effort to innovate in search of productivity gains, the process of evaluating the innovations in terms of real performance, and the shift in resources from less effective methods to more effective methods is the invisible hand of the market.

- 1) Potential individual suppliers of a desired good or service are motivated to develop and test their ideas by the prospect of being able to earn profits if their idea turns out to be valuable.
- 2) The entrepreneurs often seek financing from investors who are prepared to invest money to enable the entrepreneurs to develop their idea in hopes that they can share the profits with the entrepreneur if the idea turns out to be valuable.
- 3) The judgment about the comparative value of the innovation is judged in the marketplace of consumers who decide to buy the new product or service or not.
- 4) The shift of resources from the less valuable old methods to the better new methods cause the industry as a whole to become more productive.

As Schumpeter famously explained when describing the power of free markets to encourage innovation, "If you invent a better mousetrap, the world will beat a path to your door." This ensures that markets can produce *dynamic* efficiency over time through the continued search for better products and services, as well as *technical* efficiency through the need to compete to satisfy existing customers.

The Privatization of the Educational Production and Consumption System

This idea about how market competition can fuel significant innovations and productivity gains across an industry or even an entire economy has supported many of the recent efforts to “privatize” the educational sector. The critique of the existing system of centralized efforts to create a dynamic, innovative, learning organizational field in the domain of education was that the centralized control by the government, influenced by the knowledge of existing professionals or social science researchers had become too stagnant, too slow, too risk-averse, and insufficiently responsive to the true customers of the system – the parents and students.

What was needed was a system that empowered the customers, allowed many more flowers to bloom more quickly, and was able to push more resources to the blooming flowers and take away resources from the fading weeds. Sustained by this idea, a whole group of dynamic “ed entrepreneurs”, supported more by private philanthropy than government, and operating at the boundaries and edges of the education profession rather than manning the center grew up in search of the “better mousetraps” that could improve educational outcomes.

A Quick Functional Comparison of the Two Systems

It is useful to draw a quick, functional comparison of how this system was supposed to create an educational system that could produce steady productivity gains compared with the government supported, central research and development system.

- 1) Unlike the centralized research and development system, the decentralized market system did not insist on holding onto a social point of view that could take account of system level effects of educational innovations; or, perhaps more accurately, it assumed that all the important system level effects could be observed at the individual level and simply added up to reveal the social level effects.
- 2) To the extent the decentralized market system *did* take a social point of view, and account for the performance of the system as a whole, it did so through the use of nationally administered standardized tests of academic achievement that measured how successful the system performed in getting students above particular specified levels of achievement.
- 3) The decentralized market system did not necessarily pay a lot of attention to the detailed character of the innovations being tried. The reasons were two. On one hand, the innovations were too many and too detailed to permit central cataloging. On the other, the innovations were treated as the proprietary knowledge of the innovators, and it was assumed that an important reason for innovating lay in the prestige or money that could come to the individuals or organizations who invented the ideas.
- 4) The decentralized market system was similarly somewhat disinterested in the effects of a given innovation; they could assume that valuable results would be observed by the educational consumers, and that if individuals were allowed to choose educational providers, the value of the educational service would be revealed in the choices they made to go to one service provider rather than another; the market could provide a guide as to value that did not need the complicated processes of program evaluation.

- 5) The decentralized market system similarly did not have to make explicit decisions to allocate resources to promising new efforts and take them away from less effective efforts that had been used in the past; the re-allocation of resources would happen naturally as the educational consumers shifted their custom from one educational supplier to another.

A Critique

With more than a decade of experience of this experiment in educational entrepreneurship to review, it seems clear that this effort, too, is having its difficulties in driving performance improvements across the ed sector on all relevant dimensions of value. That empirical experience might cause us to reflect a bit on what might be wrong with Schumpeter's theory when it comes into contact with the large social production systems that seek to produce complex social outcomes. Those systems have the following characteristics that distinguish them from the market processes that organize the overall level of production and distribution in (more or less "pure" market systems):

- 1) Overall *spending* to sustain levels and distributions of consumption depends on spending by government, philanthropic institutions, and fees for service, with the bulk coming from government
- 2) Overall *production* of the system is distributed across different kinds of organizations including government agencies, nonprofit/voluntary sector organizations, and commercial enterprises. These organizations differ from one another in terms of their revenue sources, their form of ownership, governance, and accountability, and consequently both firm level objective and production functions.
- 3) The *value of the performance* of both individual educational suppliers and the sector as a whole is judged at individual levels by the "consumers", "users", and "direct beneficiaries" of the system, and at aggregate levels by "citizens", "taxpayers", and their self-appointed and elected representatives operating in the civic, political, and governmental spheres.

A starting point for this review might be to note that the idea of "privatization" is itself a somewhat complicated and confusing idea, and leads to even more confusion about the terms in which educational innovations in practices, financing, and performance should be evaluated.

Let's start with three quite different ideas about the concept of privatization.

Pure Privatization

One idea about privatization was that governments would withdraw entirely from the educational market place as financier or regulator, as a supplier, and even as an evaluator of the quality of the educational services being provided. Government would leave everything up to the market. Individuals could decide how much education they wanted, pay for it out of their own pocket, and evaluate what they got for their money in their own terms. Society as a whole would get the educational production system that individual customers were willing to buy, and individual educational suppliers were willing to produce and sell. The level and distribution of educational services would be determined by aggregate consumer demand for the services. The overall quality and impact of the

services would be determined by the individual consumers of the services on one hand, and on the strategic decisions of profit motivated suppliers to provide quality now, and to experiment and innovate with new educational services and methods of supplying them in their competitive markets.

Let's call this "pure privatization" since it essentially privatizes the entire supply and demand of educational production and consumption in both the short and long term. Significantly, no country has chosen this option. In all countries, the government has remained involved in financing, regulating, or directly managing educational services. And it has maintained a significant role in trying to evaluate the overall performance of the sector in terms of aggregate results that include more than the satisfaction of the individual consumers who bought the educational services. That should give us some reason to be concerned about the value of the Schumpeter model right from the start.

Marketization

A second idea associated with privatization was something that could more properly be called "marketization" of educational services. This conception kept the government importantly engaged in shaping the national system of educational production and consumption, but altered the way in which the government participated. In *marketization* the educational production system, the government retained a commitment to finance educational services (presumably to ensure the "right" level and distribution of educational production and consumption), but it gave up its dominant, nearly monopolistic, position as the supplier of educational services. The stream of government dollars available for purchasing educational services would be distributed across government, voluntary sector, and commercial suppliers of educational services.

The hope was that "marketization" of the supply of educational services would break up the grip of "the one best system" for producing educational results. That, in turn, would provide (at public expense!) options for individuals with different ideas about the ends and means of the educational systems, increasing the capacity of the system to respond to the individual consumer demands. This would also create a great deal of natural variation in educational production processes that could be used to test whether some methods worked better either for some individual goals. To the degree that the system as a whole began to respond more efficiently to heterogeneous individual consumer demand, we could reasonably assume that the system was improving in terms of its ability to meet individual demands. But to the degree that consumer demand had some homogeneous elements (and aligned fairly closely with the values that the wider public wanted to see produced by and reflected in the operations of the system as a whole), then the variation in the educational production processes generated by marketization might also produce superior methods not only to meet niche demands, but also to improve generally across many different niches – creating aggregate productivity gains for all as well as for greater responsiveness to individual demand.

An important feature of the more common "marketization" policy initiatives (as distinct from "pure privatizations" initiatives) was that they left some residual power to define society wide educational objectives at the social, governmental level as well as at the level of individual consumer demand. The *public as a whole* would retain the practical power to arbitrate the individual level impact, and ultimate social value being produced with the use of public educational dollars, and state regulatory authority. To the degree that the government used its regulatory authority on the demand side to require that children be educated, and on the supply side to define what constituted an educational experience that would qualify to meet this requirement, it could continue to influence who used

educational services, and what the services were. To the degree that government money flowed to voluntary and commercial sector educational producers through grants and contracts, public values judged to be important to the public at large could be advanced through more or less restrictive conditions placed on the use of the public dollars provided.

Through these means, government, acting as an agent of the public, would remain a potentially important arbiter of the value being produced by the system at both individual and aggregate levels. As the arbiter of the social value that the educational system was generating through its impact on particular individuals, and the way that those individual level effects accumulated over time and across individuals to create particular aggregate economic, social, and political conditions in the society, government could shape the system to achieve public goals such as promoting economic opportunity, and upward mobility not only in economic, but also in social and political terms. By enabling upward mobility across these different spheres, it could advance important equity goals, and strengthen the society as a whole as well as satisfy the current individual consumers of the educational system.

Of course, because the different educational suppliers that showed up and gained market share in the marketized (as opposed to the purely public system) were to some degree structurally and financially independent of the most direct forms of government control, the degree to which the government's goals could be reliably reflected in their operations was less than was possible through a system that consisted entirely of public agency providers. The providers remained private organizations. Therefore, they could decide whether to stay in the business, accepting politically authorized government regulation and the terms set on government grants and contracts, or eschew the money and operate at the limits of the government's tolerance of what constituted an appropriate education.

Considerable difficulties and tensions arise in such systems due to struggles over how the private educators produce educational services, to whom they provide their services, and how much financial support the government will supply through direct grants and contracts or tax breaks of various kinds. But it seems likely that a marketization system will remain responsive to the public demand for educational services expressed in regulation and terms placed on the use of government dollars to a greater degree than the pure privatization system. At the same time, it will probably produce more variation in educational products, services and production processes than a government monopoly, but less than would characterize a pure market system.

Individualization

The third idea of privatization – the one that became the most widely encouraged challenge to the pure public system is what could be called the “individualization” of what remained a publicly financed educational system. The key feature of this system is that the public continued to pay for the costs of educational production, but it gave individual educational consumers the choice to decide which educational supplier they would rely on.

In many ways this looked like pure privatization in that consumer choice – and the individual arbitration of the value provided by the educational system – would be handed back to individuals and taken away from much influence by the society as a whole acting through government the use of government regulatory authority and tax dollars. But this is not exactly the right interpretation of this system for two key reasons.

First, in many nations, individuals had always had the right to choose from among educational suppliers. They could choose religious schools, privately endowed schools, schools created by neighbors, or even schools created by their own parents. The state required all children to be educated, and placed that burden on the parents, but if the parents did not like what was offered at public expense, they were free to spend their own money and time on a different educational supplier (as long as it met some minimal criteria to qualify as an educational process that the public judged to be important for all children).

Second, under the many systems developed to support “school choice,” the society as a whole, being taxed by government, remained the financier of the educational suppliers. Parents and students were choosing which school they wanted to attend, *but spending tax dollars to buy the particular services they received*. This was explicit in the case of educational vouchers in which the government provided payments to individuals to purchase services from qualified educational suppliers.

But there is also public version of this system that operates on some of the same basic principles, but provides choice to parents *in the context of public schools* in particular, rather than in the choice of schools operating in all three sectors. The idea of (public school) “choice” applies only to the assignment of children *within public schools*. Educational consumers continue to have the right to buy educational services outside the public system with their own money, but under the school choice system, they *also gain the right to choose which public school to attend*. That choice is no longer made by a central school administration on the basis of geographic location or other considerations the school administration thinks are important; the choice of which school to attend made by the individual consumers.

It is important to see that the system of public school choice is similar to the use of educational vouchers in the sense that it delivered to educational consumers the right to decide which school to attend, and the state would pay for the education by reimbursing public schools according to the number of children who chose to attend the school. The only difference between this system and the proposed voucher systems (and it was an important one), was whether non-public schools could compete for public dollars, with the voucher system allowing payments to non-public schools, and the school choice systems requiring students to choose from a menu of public schools if they wanted to benefit from tax financing.

The net effect of this form of privatization was two-fold: first to increase the power of educational consumers (parents and children) to judge the value of the educational services they received; second to allow non-private schools to compete for government dollars by making appeals directly to parents. The overall level of educational consumption would continue to be supported by government subsidies of the individual demand for education, and that, plus a continuing rule that required parents to educate their children would presumably establish a universal floor for the consumption of educational services. The suppliers of educational services would have to become more responsive to what the parents and their children wanted from them. And, some additional variation in the specific forms of education would be added to the system.

In effect, the value of output of the educational industry could be increased by meeting the varied demands of the consumers on one hand, and perhaps by finding in that varied response some methods that would work better in achieving educational goals for all goals, across all possible students. Efficiency would increase by meeting demand for individualized educational products and services (what

economists would call “allocative efficiency” in meeting diverse consumer demand), and by widening the range of variation that could be used to find methods that worked better for all students against all objectives – not just the idiosyncratic ones (what economists would call “technical efficiency”).

Table 3 compares these different ideas of privatization:

Table 3: Three Different Ideas of Privatization (Compared with Pure Public)

	<i>Educational Suppliers</i>	<i>Educational Financing</i>	<i>Arbitration of Value</i>
Pure Public	Government Agencies	Public Tax Dollars	Body Politic
Pure Privatization	Private	Consumers	Consumers
Marketization	Private and Public	Private and Public	Private and Public
Individualization	Private and Public	Private and Public	Consumers

A review of this table makes a key point: In the form of privatization we described as “pure privatization”, or the “individualization” of publicly financed choices about educational value, the role of a public or collective arbiter of value in defining the ends and means of producing and delivering educational services is significantly reduced. In the form of “marketization,” the public as a whole, acting through government financing and regulation, retains a significant role not only in controlling educational service delivery, but also in defining the valuable results of those educational efforts (including but not limited to the satisfaction of individual clients).

One important implication of that is that to the extent that society wants to achieve wider goals than individual consumers seek for themselves, and wants to see the results of its educational policies to accumulate to different aggregate social circumstances that are not necessarily the concern of individual parents (and could stand in the way of their particular desires as consumers of the system), the social goals might end up taking a back seat to the individual goals as the drivers and guiders of educational improvement efforts.

The Way Forward in Analyzing National Educational Systems

A Quick Review of the Character of a National Educational Systems

The discussion so far reveals the fundamental problem for the RISE Project. On one hand, the RISE project is committed to generating sustained productivity gains in the quality and impact of national educational systems in developing countries. We have two quite different models of the conditions under which social production systems could continuously improve.

Centralized Command and Control v. Decentralized Markets

One emphasizes the virtues of finding some means of centralizing the process of stimulating, supporting and diffusing innovations. This has the virtues of: 1) protecting a national evaluation perspective; 2) taking advantage of collating information from many different initiatives and experiments for collective review, discussion and planning; and 3) being able to use powerful levers associated with money, regulatory authority, and professional knowledge and legitimacy to move the existing system.

The other emphasizes the virtues of a bottom up, economically motivated and guided effort to create test and diffuse innovations in response to consumer demand (with more or less government subsidy, and more or less government controls over how the money will be spent by the consumer beneficiaries).

The first seems lie a solid technocratic approach. It defines national objectives, assesses current performance against individual level educational impact and the wider social goals of the national educational system, seeks to find or develop improved methods for accomplishing the goals in some systematic way, tests those ideas, and once they are proven to work, supports the diffusion of the new (and perhaps the liquidation of the old). This system seeks to use the power of explicit practical reasoning and the methods of science to find the path forward to improvement. It imagines that both existing knowledge, and the capacity to increase knowledge lies at the national or central level of society, and that the knowledge-based approach can and should guide the search for improved performance.

Skeptics worry that this system does not search widely enough, avoids some of the most apparently intractable but socially most important parts of the system, and moves too slowly and too partially to create momentum in increasing the overall productivity of the educational system with respect to national goals.

Cynics worry that this system will suffer from the problems described above even when it is working well, and that the most likely result of such a system will make the system vulnerable to capture by existing educational suppliers, and freeze the performance of the system at current levels.

In contrast, the second seems like a dynamic market approach – one that can deliver more power and influence to the consumers of educational services, and through that change, motivate educational suppliers to innovate and create variation in educational products, services, and production processes. That variation, in turn, holds the potential for improved performance at both individual and social levels. The improved performance can be sorted out quickly simply by observing what products, services and production processes individual consumers prefer, and the expression of those preferences, tied to financial payments to producers, in competitive markets of suppliers will not only naturally allow the valued suppliers to grow, but also shrink the capacity of less efficient and effective suppliers to claim assets. The system for generating, testing, and increasing the market share of educational services that do well in meeting individual consumer demand is fast and powerful in producing changes in the national educational system.

Skeptics worry that the dependence of this decentralized system will not give adequate focus to social level objectives for the educational system. The primary concern is that an educational system run on these principals will increase rather than reduce inequalities in educational outcomes as initial social inequality in social position enable those who are better endowed materially, socially, and politically to

use their positions actively to advance the interests of their children through publicly supported individual choice systems relative to those who seem less well positioned to take advantage of the new opportunities that are opened. That, in turn, runs the risk of undermining the performance of the national educational system to advance the ideals of equal economic, social, and political opportunity, and upward mobility for all, and particularly those towards the bottom of the system.

Cynics worry that this system will not only fail to produce social equity objectives long associated with educational efforts, but may also shift the focus of educational providers on satisfying consumer demand rather than achieving the individual level impacts of education that can achieve desired economic, social, and political conditions in the society. They worry that education will become a form of entertainment to children and a respite to hard-pressed parents rather than a powerful form of individual development as economically resourceful, civic-minded, and politically empowered individuals.

Unfortunately, it also seems as though individuals line up on different sides of this question primarily on the basis of the ideological and professional commitments rather than any well developed or tested theory of what could actually work to improve the system level performance of national educational systems. It is that gap – the one between ideology and facts -- that RISE seeks to close.

Public and Private Aspects of a National Educational System

The problem, however, is the educational system is neither a bureaucratic technical system, nor a market. And that means that our ideas about how to influence that system to become more productive with respect to the many different goals it seeks to achieve have to depart a bit from these pure forms. To see the problem, let's quickly review the public, bureaucratic, and private market features of national educational systems.

- It is a *public* system in the sense that it is *subject to state regulation* requiring all children to be educated, and *setting standards* that must be met by educational suppliers if they want to claim that they are providing the required educational processes and results
- It is predominantly a *publicly financed system* sustained with the use of public tax dollars, though there are parts of the sector that are receive funds from philanthropic sources, and from fees paid by those consuming the educational services provided (at a more or less subsidized price).
- It is also primarily a *publicly produced* system since most educational suppliers are government agencies, but the system also has within it private nonprofit, and private commercial firms.
- The different educational suppliers *can be supported by financial and material support from all three sources*: government schools depend heavily on government tax dollars, but often depend on voluntary contributions and special fees levied on consumers; nonprofit schools depend heavily on voluntary commitments of money and effort, but can also receive tax dollars through government contracts, and charge fees to those they serve; commercial enterprises depend heavily on fees for service, but can also receive government dollars through contracts, and charitable dollars above and beyond the fees provided by their customers.

- Because the sources of authorization and financial support vary across the sector as a whole, and within particular individual educational suppliers, the *arbiters of the value being produced by the suppliers varies as well*. All authorizers and financial supporters claim to be interested in and focused on providing high quality educational services, and efficiently and effectively achieving valuable educational outcomes for each child to whom services are supplied. And they may be entirely earnest in that goal.
- But, their ideas of what constitutes a valuable educational process and result for each child may differ considerably from one another.
 - The public, acting through the government, might be concerned about the aggregate social results of their spending across the society as well as the effects on individuals. Particular ideas of what role the distribution of educational services out to play not only in satisfying individuals, and building a strong economy, but also creating a strong civic and political culture can be important to the government if not the individual users of the educational services. They might also like to keep aggregate costs low.
 - The individual users of the services (children and parents) might want highly customized services tailored to ensure the best possible educational results for their child, and somewhat indifferent to what is being provided to other children, and what the aggregate cost and impact of the system is on society as a whole. They might also have somewhat short term and narrow ambitions that focus on low cost childcare to allow them to work, or the fastest possible transformation of their children into individuals who can share the economic burden of raising a family.
 - The volunteers and philanthropists who shoulder the burden of paying for or working to produce the educational services they support without being forced to pay for it, and without necessarily internalizing all the benefits that come from their own efforts, might value a particular kind of education, for a particular population, that represents their ideas of a good education quite apart from what the public as a whole might want provided through government operations, or that the parents and students who want education would be willing to pay for on their own.

There can be, and probably is, significant overlap among the different dimensions of value that are used to assess the value being produced by any given educational supplier. But there also might well be some important differences – particularly if the government is particularly interested in advancing aggregate social objectives as well as satisfying the parents and students; or if the volunteers and philanthropists have their own ideas of a valuable education that depart from what the public believes should count as a quality education. This is the basic question that confronts any society when it decides whether to authorize and encourage schools that encourage the adoption of particular religious beliefs, ethnic identities, or the methods that will be used to discuss both values and facts in public discourse in general.

A Mixed Public/Private Social Production System

These observations describe a complex social production system that mobilizes and deploys assets in response to public, philanthropic, and private demand for educational services, across a complex array of educational suppliers. We often try to analyze this system through the lenses of two different ideologies:

- a public ideology that wants to insist that education is both a right and a duty at the individual level that must be managed not only to satisfy the individual desires of parents and children, but also underwrites the creation of a prosperous, sociable, and just society by ensuring that the educational system as a whole takes on a particular structure, conduct and performance that can achieve that result, and continue to learn and improve over time as to how best to achieve these individual and social objectives; and
- a private, market ideology that assumes the goal of the educational system is to satisfy the desires of the parents and children who receive and use educational services to advance their own ideas about how they would like to be educated, that wants to preserve the freedom of individuals to choose educational services that fit their particular ideas of a good education (particularly if they are willing and able to pay for it or provide it for themselves), and that approves of some level of government financing and regulation of educational services (and consumption!) to be able to take advantage of the power of education to produce aggregate public benefits as well as individual private benefits.

But as we have seen, these different ideologies generate practical ideas about how to organize the educational system for sustained learning and continuous productivity gains which have significant weaknesses as well as strengths.

Principles to Guide the Analysis

To consider the way forward, we may have to abandon some ideological purity in search of some kind of mixed political/bureaucratic and market system that can work by taking the strengths of both systems, and seeing how they might best be combined. We begin with some principles, and then go to some concrete examples that might hold lessons for us.

Principle 1: The National Education System is the Proper Unit of Analysis for Results, Performance, and Intervention

The first principle is that we should not give up the idea that the proper unit of analysis is the *performance of the sector as a whole*, not necessarily the performance of particular policy initiatives launched by national government, nor the performance of particular kinds of educational providers, nor the performance of particular organizations delivering educational services, nor the development of particular programs or methods that seem to improve educational outcomes along particular dimensions in particular locations.

All these particular activities designed to improve the performance of the sector as a whole are potentially important ingredients of achieving that goal, and each can be evaluated in terms of their contribution to that goal as a particular ingredient. But the ultimate test is whether any of these continuing efforts or new initiatives can move the needle with respect to the aggregate social

performance of the sector. The *micro* efforts of these parts (some of which may be very large and some much smaller) have to be seen in light of their *macro* effect.

Principle 2: *The Performance of the National Education System Should be Judged at Both the Individual and Aggregate Level, and in both Utilitarian and Justice Terms*

Second, the performance of the sector as a whole has to be judged at both the individual and the more aggregate social level, and in terms of both utilitarian effects on material well-being, and on the degree to which the performance system meets social equity goals.

At the individual level, we are concerned about the impact of the particular initiative or system on short run learning outcomes, the satisfaction and engagement of students and parents in the production of those outcomes, and the cumulative effect of the short run learning outcomes on future educational opportunities and outcomes. We are also concerned that individuals are treated and viewed as individuals; that adaptations are made to accommodate individual variation in capacities and learning styles; and that individuals are treated fairly and with respect to their individual rights as well as their individual wants and needs.

At the more aggregate level, we are concerned that the educational system accomplish the social goals of preparing individuals in the society for individual and collective life in the economic, social and political realm efficiently and effectively (that is, with the least use of private and public dollars – though our collective political attention is focused primarily on the use of public dollars). We are also concerned that there be widespread, equal access to quality educational services consistent with the needs and rights of individuals (if not always their individual wants), and that education achieve social justice goals not only with respect to equal access, but also with respect to either establishing a base-line of educational opportunity for all, or one that succeeds in promoting significant absolute and relative upward mobility for individual members of the society.

Table 4 places these different evaluative dimensions in a simple matrix to emphasize two important aspects of this system level evaluative framework. First, the effects can be measured at the individual and aggregate social level. Second, the individual and aggregate effects we can observe and be a part of can be evaluated against two quite different philosophical standards: the utilitarian idea of the good, and the deontological idea of the fair and just.

Table 4: Evaluative Dimensions in Assessing Educational Performance

	The Good: (Utilitarian Philosophy)	The Fair and Just: (Deontological Philosophy)
<i>Individual Level Evaluation</i>	Clients Satisfied with Service Clients Future Welfare Improved	Clients Fairly Treated Clients Receive Services They Deserve
<i>National System Evaluation</i>	Social Prosperity Increased	Society Advances Economic, Social, and Political Equality

As a crude rule of thumb, you could think of the *individual* good as “client satisfaction” with the educational process and result. The *social* good could be defined in terms of the desired social outcomes of education – the degree to which the educational systems as a whole helped create a prosperous economy, a tolerant civil society, and a knowledgeable polity.

The individual idea of fairness and justice could focus on whether individuals have equal access, whether they are treated fairly, whether they get what they are entitled to have, and that their individual rights and privacy are protected in the schooling process. The aggregate idea of social justice could be conceived in terms of the degree to which the system provided equal access to quality educational services; the degree to which the system not only vindicated individual rights to education, but also fairly imposed the burdens associated with those rights; and the degree to which the educational systems supported significant upward mobility in the society as an embodiment of the ideal of equal opportunity.

Note that the effects produced and observed by the system at the individual and social level, can also be evaluated by individuals, and by the society as a whole. Individuals who use the educational system – the customers or clients of the system – can evaluate their own personal experience in consuming educational services. They can compare what they get from the system in terms of their subjective views of what they want, what they think they need, and what they think they are entitled to.

But other individuals in the society who are engaged as individual citizens and taxpayers as well as educational consumers, can view the system in terms of its effects on individuals other than themselves. That is, they could hold up the experiences they have as consumers or observers and supporters of individual educational experiences and decide to what degree the system provides to individuals what they as individuals think a good and just society would supply to individuals.

Finally, the society as a whole – that is, all individuals affected in some way by the current operations of the educational system (which includes citizens and taxpayers as well as the recipients of educational services), as they express their views through their elected representatives and the messy processes of democratic governance) – can also have a *collective, public* view of what constitutes a good and just educational system. This is particularly important and decisive when public money and authority are being spent.

Just as individuals can hold views about what is good and just at the individual and collective level, so the body politic assembled into a collective public arbiter of value can hold views about what is good and just at the individual and social level. When looking at the individual users of educational services (provided at public expense), they can decide to take individual customer views of what the customer wants seriously and provide for that, or they can limit their ideas about what customers should get to what they seem to need and deserve – not just what they want. When looking at the aggregate dimensions value being produced, they might be interested in keeping the costs to taxpayers low as an important practical goal, but also the desire to give special support to those children who have special needs the extra help they need.

Principle 3: Recognizing and Valuing Variation in the System

Third, in analyzing the system and how its performance might steadily improve over time as conditions change and improved educational methods develop, it is important to distinguish between the current operations of the system as a whole from the set of emergent innovations in the way the system as a whole operates.

As noted above, many social conditions conspire to create a powerful status quo that is relatively homogeneous in: 1) what it produces, 2) how it produces the particular results, 3) how it evaluates those results, and 4) how it finances (or more generally, resources) those activities.

While this is a large and stable system, it need not be *simple*. Indeed, if the environment is complex, the stable system may well be very complex as well. The complexity can arise from the fact that the system has found a way to fill many different stable niches. Indeed, the complexity of the system might help guarantee its stability by providing a place for everyone, with each faction being able to find the right kind of educational supplier.

Indeed, the stability of the system as a whole may depend on having enough variation to accommodate particular social niches that would otherwise challenge the current operations. For example, it might be true that the existence of private school options relieves some of the strain on public schools to accommodate some very particular kinds of educational demands, and allow the larger public system to concentrate on the more common demands.

However, complex the existing system is, if the performance of the systems is going to improve overall, it must change: 1) what it is currently producing, 2) how it is producing those results, 3) how performance is being evaluated, and 4) how resources flow through the system. That improvement can come from improving performance in one or more niches, by finding new ways to operate across existing niches, or (ideally) by finding methods that improve performance across all niches.

At any given moment, there are hundreds of thousands of adaptations and innovations being proposed or implemented in any national school system. These departures from existing local practices can vary along many different dimensions. They can vary in purpose. They can vary in terms of target population. They can vary in potential scale. They can vary in terms of potential significance. They can vary in terms of where they fit in the operational value chain. They can vary in terms of the amount of collaboration they require. They can vary in terms of whether the ideas are globally new or just locally new. They can vary in terms of their operational and political risk.

The point is, however, that these ideas, and the organizations and individuals behind them are the seeds of change, or to change the metaphor, the stepping stones into a future of improved national level performance.

Principle 4: Ensuring a Diverse and Strategically Valuable Set of Innovations for Testing

While the existing system can and will produce a great deal of natural variation of its own as educational suppliers adapt to local contexts and niches created by larger systems that authorize, financially support, and evaluate school operations, there is no guarantee that the overall set of innovations stimulated by the current system will include those that can make a significant impact on the system as a whole. In fact, it is likely that that system will generate innovations that are close to current practices, and operating in the mainstream of educational efforts rather than on the boundaries of the system – namely those that are having the most difficult time learning, those who have the

fewest private resources to use in pursuing education, those who are most resistant to the “liberating” effect of education, and so on. It is also likely that the system will focus more on relatively small operational innovations that can be easily mounted, and quickly and straightforwardly evaluated, and less on the institutional innovations that could create more innovators on one hand, and more innovative organizations and systems on the other. These biases may slow the rate of innovation and learning below what might be needed to move the performance of the system forward on all dimensions of performance including but not limited to individual learning and development.

This suggests that some special efforts might be needed from the “center” or “off on the side” (anywhere but in the middle of the existing system) to authorize, financially support, and evaluate those innovations that might be important to achieving both individual and system level goals. A useful analogy might be to the tri-sector health system which does an excellent job in developing innovations in medical treatment for the most common diseases, but struggles when it faces serious problems experienced only by some, or only by those who do not constitute a large market for drugs and medical treatments of acute conditions. That system also struggles when it is forced to pay attention to inequalities in access to preventive and curative medical services.

To ensure an adequately broad and deep array of experiments be undertaken, it is important to begin with a clear-eyed view of the overall performance of the system (see principle 1 above). That perspective should include an accurate and relatively complete picture of what innovations are now being tried, and exactly where they are testing the existing system in terms of improved social performance. But it should also attention to the problems that have been set aside because they are “too hard,” or those big and small glimmers of ideas which have not yet been developed. In short, it is important to understand what exactly is in the “risk portfolio” for experimentation, as well as what is currently being done, and to ensure that we have been neither too reckless nor too conservative in our search for solutions.

The role of developing and managing the education risk portfolio is currently played more by educational research centers and philanthropic foundations than by commercially motivated investment funds. But one has to worry about the degree to which any of these sources of strategic judgment, financing, and evaluation of educational innovations possesses the appropriate analytic frameworks and capacity to find or develop the innovations that would have important systemic effects. This calculation is particularly hard when one recognizes that the “important systemic effects” could come from many different sources such as: 1) the widespread diffusion of small but important operational innovations; 2) the development of larger institutional innovations that could increase the number and location of innovators in the system; 3) the innovativeness of the systems themselves; and 4) the evaluation criteria and methods that could stimulate and discipline the learning of the system as well as the current performance. This last point – the importance of innovations in how the system as a whole can distinguish important innovations from less important ones is taken up immediately below.

Principle 5: Organizing the Demand Side of the Educational System to Distinguish Valuable Innovations from the Fads, and to Scale the Valuable Efforts at the Expense of the Less Valuable

The value of the innovation portfolio for the educational system ultimately depends not only on the number and quality of innovations being developed, but also on the discriminating processes that allow the system as a whole to recognize the good innovations from the bad, and diffuse and scale the good innovations to replace their less successful forerunners.

It is important to recall that the demand side's active participation in the evaluation and financing of new products and services is absolutely essential to the Schumpeter model of "creative destruction." The alert, fast judgment of individual consumers as to the value of a new product or service is what fuels the growth of the new (good), relative to the old (bad). This process is particularly effective because it not only provides for the growth of the new (with new purchases and the promise of even more in the future), but also because it denies resources to the old (as consumers abandon those they used to support). This twin effect tends to produce very rapid changes in the market share of the new versus the old.

But it is also important to recall that the effective demand side for national educational systems is *not principally individual consumers* with money to spend on educational services they value in their own terms. National educational systems typically include that kind of demand as a portion of the overall aggregate demand for education. National educational systems also include the kind of demand that comes from voluntary third-party payers who pay for the provision of educational services through endowments, or a continuous flow charitable support to a school, or contributions to scholarship funds. But in most national systems, the largest amount of funding comes from government tax revenues. And, even those systems that are supported by consumer purchases or charitable contributions are often regulated by the government to ensure that the schools deliver a service consistent with national goals for education.

Since the practical power to define value in educational performance comes from those who make decisions to financially support (buy!) services from particular educational suppliers, the particular evaluative criteria used to distinguish good educational performance from less good lies with those who have the most money to buy, and the most authority to regulate, the production of educational goods and services. For the most part, that is the government (ideally acting as an agent for society as a whole.) The implication is that the capacity of the educational system not only to recognize increased value in educational activities, but also to scale the more valuable activities up and deny resources to the old has to lie with government (as it is influenced by the wider public).

It is here that the concerns about supplier capture become most important. If current suppliers of educational services – whether government agencies, voluntary sector enterprises, or commercial enterprises – can shape government financing and regulation to their particular ideas of creating public value in education, they can succeed in dominating the supply, and therefore the level and distribution, of educational services, and the impact that education has on the society.

In order for the demand side to play its important role in encouraging system learning and improved performance, it has to be a reliable arbiter of the public value produced by the system as a whole, and one that can quickly and reliably assess the micro and macro value of any particular innovation that emerges in the field either as a result of natural innovation, or strategic judgments made about the particular areas in which innovation would be particularly valuable, and the kinds of innovations that seemed most promising. If the demand side is not aligned with the sources of financing and authorization that are the largest forces shaping the operations of the supply side, then there is no guarantee that the innovations being developed will create a gale of creative destruction. It might, as an alternative, simply create idiot winds that sweep across the landscape with destructive rather than construction impact.

The Simple Analytics of Innovation and Learning in Complex Social Production Systems

Reflection on the question of how a complex tri-sector social production system like a national educational system could learn over time to improve its performance suggests an overly simplified model. In this model, the rate of learning by the system can be seen as a function of:

- 1) the number of innovations tried
- 2) the size, character, and (system) location of the tried innovations
- 3) the supply, capacity, and (institutional) position of potential innovators
- 4) the scope of social authorization and financial support for innovation at different levels
- 5) the evaluative terms to be used in assessing the social or public value of a proposed idea
- 6) the *ex-ante* assessed potential of the innovative ideas that were authorized and supported
- 7) the *ex post* evaluation of the empirical results produced
- 8) the capacity of the system that provides financial and social support for new ideas to distinguish good ideas from bad, and to provide sufficient financing and support for the spread of ideas of proven value
- 9) the capacity of the system that provides financial and social support of the status quo to recognize and act on the potential for replacing the old with the new

At the heart of this system are the processes that are the focus of the principles outlines above: the criteria to be used to evaluate innovations, the generation of variation in the system, the ability to distinguish the valuable innovations from those that are less valuable, and to grow the good and shrink the bad in terms of their market share in the ed sector as a whole.

One could think of this as the “innovation system” as it seeks to challenge existing operations, and to enable good ideas rise to the top and worse ideas sink. How best to manage the innovation and system change that must support and guide national level educational systems is essentially the issue that is contested in the comparison between the centralized R and D systems, and the Schumpeterian system.

The GSCRD system imagines that the best source of ideas for change at all levels of the system might come from politicians looking for results, or educational professionals seeking to achieve their aspirations for social impact, or policy analysts, program evaluators and social scientists who want to improve the performance of public sector production systems. This system also imagines the best methods for vetting new ideas is through scientific and professional knowledge and peer assessment of proposals. The best way to know whether a proposal works is through the methods of program evaluation, or (even better) through randomized controlled experiments where those are possible.

The CDHDMD system imagines that the best motivator for good ideas is the potential financial returns that could come from patenting a better mousetrap, and that the best test of whether an idea is producing good results, and valuable or not is to ask the person who is using the new good or service. Knowledge and expertise are useful in developing value creating innovations, but it is the person who can see the “market potential” of a practical application of new knowledge who provides the spur to value creating innovations.

Table 5 presents a simple table that makes the key distinction between: 1) what might be viewed as the current, steady state operations of the national educational system on one hand, and 2)

the challenges to that system embodied in the many different proposals about what educational producers should produce and how they should produce it, how educational producers should be managed, how educational producers should be evaluated, and how the national system as a whole should be governed and financed, on the other.

Table 5 also makes a key distinction among three different social sectors – the commercial sector, the voluntary/philanthropic sector and government, and indicates how each sector might and participate in financing, producing, and evaluating both the existing social production system on one hand, and the size and character of the proposed innovations on the other.

Table 5:

A Three Sector Model of Innovating and Operating in a National Production System

	Commercial Sector	Philanthropic/Voluntary Sector	Government
<i>Innovation and Experimentation</i>	Financially Motivated Venture Capital	Philanthropic Capital Motivated by Donor and Volunteer Concepts of Good and Just	Social Research, Development, and Evaluation Funds
<i>Current Operations</i>			
<i>Financing</i>	Commercial Capital Fees for Service	Big Philanthropy Many Small Donations Labor Contributions Fees for Service	Tax Dollars
<i>Producing</i>	For Profit Schools	Private Schools Charter Schools Religious Schools	Public Schools Charter Schools
<i>Arbiter of Value</i>	Client Satisfaction	Donors Volunteers Clients	Public as a Whole Clients with Rights

A quick review of this table along with some rough empirical facts points to some key questions to ask about the national level educational system's ability to learn to improve.

The first key question is about whether the *innovation and experimentation row has enough high-quality activity occurring within it*. This could be roughly measured the amount of commercial, philanthropic and government spending was devoted to this activity as an absolute amount, or relative to total spending on sector operations as a whole.

But the real question is whether that spending is focused in areas, and on methods, that could be expected to produce large results if the tested programs could be scaled to their optimal level. This is

hard to know, of course, but it is relatively easy to distinguish among the potential size and significance of the current initiatives being proposed, developed and evaluated. Simply ask the question of how big a change we could expect on what dimensions of national level performance, and provide an answer simply in terms of order of magnitude, risk, timeliness, and complexity. That could sort a great deal out.

The second key question focuses on the potential for *scaling* any of the innovative ideas to a significance within a reasonable time once it has been tested and developed. And it is here that our attention turns not to the supply side of the system – not the world of individual producers and their methods, purposes, and audiences, but to the world of demanders – most importantly third-party payers and regulators who act as the arbiters of educational value.

Critical to the Schumpeter model is the role of consumers as arbiters of value and financial supporters of producing enterprises. But, as noted above, in the educational world the big financier, and the big arbiter of value is government. This suggests that no idea – regardless of where it was developed and tested – has a chance to scale unless government decides it wants to not only allow it, but also demand it.

Government demand is organized around public purposes, and constrained by politics including supplier interests and concepts of the public good and justice expressed in the political system. It is expressed through both public funding and through regulations that decide what sorts of activities count as education for the purposes of the regulatory system that requires all individuals to be educated, and for purposes of financing particular educational activities with public dollars. This is the big buyer/demander in the system, and its choices drive much of what gets produced and who produces it. If the demand side is hostile to innovation, or unable to distinguish improved educational performance (at the individual and social level) then a government dominated system cannot learn to improve its performance.

The government has to remain not only open to, but actively encouraging of innovation. It also has to be reliable in its ability to recognize value at both individual and social levels and to distinguish value creating ideas from fads. But it also cannot afford to be hamstrung by methods of empirical investigation and evaluation that are limited in terms of the kinds of innovations that can be scientifically evaluated in a short period of time.

Different Models of National Level Social Production Systems Encouraging Innovation in Mixed Systems

The simple, abstract model of a national education learning system described above can be complemented as a device for fueling thought by some more concrete images of concrete institutional structures and processes by presenting some more or less familiar examples of complex social production systems that have been built and used to promote social learning. (Moore,

Federalism as the Laboratory of Democracy

One important institutional idea is the idea that a federal government structure can be seen as an arrangement in which different states within a given polity could become laboratories for alternative ways of defining and advancing social goals in particular domains. This is closely analogous to the idea that both cross national, and historical experience could also be used to help those working on national

systems of government to imagine and explore alternative systems for encouraging innovation and learning in national educational system.

The obvious advantage of this idea is that they permit the analysis of variation that occurs at relatively macro institutional levels. If one wants to explore the question of how changing state level systems of regulation and financing influence state level educational performance, and, in particular, how those state level systems can work to prioritize different individual and social level goals of education, and encourage sustained innovations that can help to advance those goals, one has to look at units of analysis that have influence at this level of the system. Looking at states in a given country have the advantage of (to some degree) “controlling for” the effects of both history and national culture while allowing for the investigation of particular features of state level governance of the system. But it will always be hard to make such inquires fully scientific. The challenge is to explore complex systems with many variables, non-linear effects, and unknown feedback loops with a limited number of cases – the kind of experience from which one might be able to learn or guess something, but hardly draw scientific conclusions.

Land Grant Universities and the Development of American Agriculture and Mining

A second interesting example is provided by the American effort to promote agriculture and mining in the path of the Westward settlement of the United States in the late 1800’s. The fantastic economic growth of the United States in that period was largely driven by growth in these sectors produced by a population that was “going west.” What they found in the west was land that could be used for agriculture and mining, if the settlers could figure out how to do that.

To support the development of both knowledge and on the ground capacity to farm and mine, the Federal Government created a system of land grant universities. These land grant universities provided the base for a complex system of basic and applied research, educational efforts directed at researchers, professionals and newcomers to these fields, and strenuous efforts to bring the learning that was occurring in the universities and the extension labs to those plowing and mining the land through a complex system of county agents that travelled their states disseminating knowledge, and suggesting solutions to local problems. The extension labs and county agents may have started out as developers and purveyors of knowledge and good practices. But soon they became conduits for identifying and seeking answers to problems that they encountered in their work with farmers and miners, and their efforts to apply basic scientific knowledge to the practical problems of growing things, and separating value dirt from less valuable dirt.

It is unclear exactly how much the dramatic growth in the level and overall productivity of the agriculture and mining system owes to these institutions and processes, but this system might hold some lessons for organizing national systems for improving productivity in educational activities, and a particular way of organizing the relationship between universities, ed schools, educational experts and consultants.

The Accumulation of Knowledge Through Reporting on the Effect of Specific Medical Protocols

A third example may not be an example because I am not sure I have an accurate description of the process that I think is actually being used in the medical system. But what I observed when my mother was being treated for cancer seemed to be an interesting way to take advantage of a system

that was highly decentralized with respect to choices about treatment, but had developed some capacity to accumulate actual experience in treating patients very quickly.

Doctors, like teachers, do not have scientific answers to all questions that arise in their practice. There are some conditions that we know can be treated effectively by some particular interventions. We know this on the basis of both cumulative practical knowledge, and scientific processes of reviewing the safety and effectiveness of the treatment. But there are always those individuals for whom the standard treatment is not feasible, or those who do not seem to respond to the recommended treatment. There are also many, many conditions for no treatment has been proven to be effective, but there are some that are recommended on the basis of some logic, reasoning, or demonstrated effect. In the background, of course, is the idea that the choices about how to treat patients should be decided between doctor and patient – not dictated by a centrally mandated practice.

My mother suffered from leukemia for which there was no certain ideas about the best possible treatment. Neither my mother, nor her doctor, was required to choose a particular treatment. Nor were they required to report to any central capacity what they chose. But what did exist was a small number of recommended protocols – a set of treatments judged to be more likely to be successful with fewer bad side effects than others, but at that stage, not established as methods that were scientifically proven to deliver valuable results at an acceptable cost. And, there was the professional expectation that if the doctor and my mother chose to use one of the recommended protocols, they would report what happened to a central registry design to collect that actual experience.

This system for collective experience with medical interventions is obviously not as powerful as the use of randomized trials to demonstrate impact, and search for important side effects. But it was an efficient way of taking advantage of a large amount of experience with a given treatment even when that experience was not structured as a controlled experiment.

Social Entrepreneurship and Large-Scale Philanthropy

A fourth idea that has had significant influence in the educational world is the concept of social entrepreneurship. This idea is very closely linked to the Schumpeter, decentralized market model of social innovation and learning. This model, like the Schumpeter model, depends on the existence of a group of individuals with ideas about how to improve the educational system. That group can include professionals with lots of experience in education, or technologists with ideas about how to use digital technology to improve learning, or just about anyone with an idea. Their motivation can be primarily to improve “educational outcomes”, and or some financial return to them if they develop an idea that can be sold at a profit to some buyer.

This group of educational entrepreneurs has found an interested and resourceful financier among a group of philanthropists who have seen the power of entrepreneurship in the commercial sector, and hope that the power of new ideas might produce the same kind of productivity gains in education that have been produced in other economic and social sectors. Significant contributions from these philanthropists have supported ed entrepreneurs not only to develop the ideas into working models, but also to support the development of networks of schools that employ the educational ideas of the ed entrepreneurs. Under changes in governmental policies that allowed public funds to pay for “chartered” private schools, they have begun to compete for public funds to maintain and expand their market share in the overall ed sector.

The entry of both the ed entrepreneurs and the venture philanthropists prepared to support these entrepreneurs through early stage development *en route* to large scale success has usefully challenged the existing status quo with respect to both pedagogy, classroom management, school management, relationships with parents and so on. But the principal difficulty they have faced is the problem of reaching significant scale in their operations. The reason has already been noted: the big buyer in the educational sector is usually the government, and governments have so far been reluctant to shift as much money to a marketized or individualized system of ed financing as would be required for these “new schools” to gain a significant market share in the supply of educational services.

The reason for government’s reluctance to do so can be attributed to two quite different causes. Those who like decentralized market systems see government’s reluctance as evidence of its capture by existing suppliers – primarily by public schools, but also by more established voluntary sector providers. Those who are concerned about the capacity of the national educational system to advance social goals beyond the satisfaction of individual educational consumers worry that the individual educational suppliers encouraged by the private sector philanthropists tend to focus too much on firm level success rather than system level success, and to define educational achievement at the school level too much in terms of consumer satisfaction and not enough in terms of the development of individual economic, social, and political capacity.

As the educational entrepreneurs have come up against the limits of philanthropic support to sustain and grow as well as simply initiate educational innovations, and realize that they will have to find wider public support to scale their efforts to national impact, they are being forced to recast their arguments from a focus on client approval at the individual level to a focus on client impact at the individual level, and social impact at the national system level. What that means for the future of educational social entrepreneurship is unclear.

Building a Professional Movement for Community Problem Solving Policing

One last example comes, again, from my own experience, and is therefore somewhat suspect. I include it, however, because it was based explicitly on the understanding that the powers of the *status quo*, institutional mimesis, and professionalism powerfully influence the conduct (and therefore the performance) of large social production systems in many fields including education, health care, social work, and so on. The key question was whether those forces could be used to promote a widespread innovation in given field that shifted both the commonly accepted ends and means of the field at large, and perhaps even more significantly, shifted the suppliers in the field to embrace a commitment to continuing innovation as they sought to respond to changing social conditions, and (to some degree) changing social objectives.

For over a decade, I worked on an effort to change the dominant model of policing in the United States from what I described as the “professional model of policing” which had dominated the field for about a century to a different model of policing described as “community problem solving.” The new concept re-defined the *ends* of policing to include crime prevention, fear reduction, and the handling of social conditions in communities that produced fear, hostility, and disinvestment beyond crime. It re-defined the *means* of policing to go beyond the traditional activities of patrol and investigation (which were essentially designed to reduce crime by arresting, or threatening to arrest, individuals who had committed or might be inclined to commit crimes) The new capacity was built on using the vast amount of data the police naturally absorbed through the calls for service that came in through 911 systems, the

observations they could make as they patrolled the cities, and the conditions that citizens complained about when they had a chance to take to the police in community meeting to identify problems that irritated, frustrated and frightened citizens and could be ameliorated by interventions that did not rely primarily on arresting suspects. The theory was that since the professional model of policing had gained hegemonic influence over the 17,000 local police departments in the United States through the forces of institutional mimesis, it could be altered by getting control of the same forces: if we could re-define legitimacy in policing to be consistent with the community problem solving model of policing rather than the professional idea of policing, we might be able to make a value creating change.

It is important to understand that we did not have, and could not quickly produce, any hard scientific evidence that the community problem solving model of policing would produce better or more just outcomes for communities than the professional model. What we did have was pretty strong evidence that the methods used by the professional model of policing were not particular effective in achieving their principal goals: random patrol did not reduce crime or fear; rapid response to calls for service did not reduce crime or fear or even influence citizen perceptions of the quality of service; retrospective investigations could solve crimes when individuals told them who committed the crime. We also had evidence that citizens called the police more often to deal with fear and non-crime incidents and conditions than with crimes. And, we knew that the existing strategies of policing were doing little to develop (and much to undermine!) their standing in communities – particularly minority communities. All this suggested there was room for improvement in the field.

We also had some significant ferment in the professional field itself. As a result of significant increases in the overall educational standards for policing, and for police executives in particular; and as a result of significant social pressure to increase the diversity of police departments and those who led them; a significant number of police executives came to the job with more open minds than those who had come before, and with a better ability to sense the problems the field was facing, and to accept some individual responsibility for trying to do better. These “reform” chiefs were lying awake at night knowing that they could be doing a better job, and inventing some more or less incremental ways of improving. Their problem was that they were up against the power of an entrenched idea of what constituted good and just policing. They could not step out alone to challenge these ideas.

What we decided to do, then, was to convene those chiefs, along with some of their influential but less curious and resourceful colleagues, in a series of meetings to invent and promulgate a different model of policing. This group acquired an influential voice in the field not through a “national report” but instead through a series of short papers distributed across thousands of police departments, and their increasingly frequent appearances on the stages of conferences focusing on policing. Cases were written and circulated that described what they were doing, and showed what was actually and concretely possible. The federal government created a large grant program to encourage police departments to experiment with different aspects of the emergent model, and to evaluate both the effectiveness of particular elements of the strategy in reducing crime and fear and building community relationships. Educational programs were developed for rising police executives across the country in which the cases were used for educational and inspirational purposes. The performance measurement systems for police departments were reviewed to reveal how closely they were aligned with the existing model of policing, and alternative created to capture the value that could be produced by the new models of policing. Eventually, both the examinations for police executives and the audit agencies that

certified police departments as professionally competent began to include elements of the new model. Slowly, the professional idea of policing began to turn in the direction of community problem-solving.

Recently, the momentum for this set of reforms has slowed for interesting reasons that would require more space to explain than I have. But for the purposes of RISE, this effort might hold the following useful lessons.

First, it is possible for small groups to gain some purchase on a professional ideology that took a long time to develop, now has a powerful grip on the field, but no longer seems up to the task. The challenge to the status quo from those at the edges of the profession concerned arises more slowly, and needs more help than the rapid shift of consumers from one mouse trap to another, but it can work to shift the preferred practices of organizations within a given social production system.

Second, the important change often involves not only the development of improved methods for achieving established and agreed upon goals, but also with a challenge to the goals themselves. I am not sure that this is necessarily true, but there is something about changing the goals that opens up more room in the operations of the system. I think this is partly true because new goals often change the evaluation of existing methods, and that helps to undermine their otherwise powerful claims of the status quo.

One of the important ways that a professional hegemony arises is that those in the profession gradually lose their ability to distinguish the ends of the organization from the existing means. The ends and the means gradually become so tightly fused that those working can no longer see any daylight between what they are doing, and what is the best way to achieve their goals. They cannot use their ultimate goals to challenge their methods. A second important effect of changing the ends is that this often invited a new constituency into the public world that is evaluating the performance of a given set of public organizations. That, too helps to “unfreeze” organizational imagination.

Third, and in my view most importantly, the particular change in the overall strategy of policing represented not only a one-time, organizational wide strategic innovation, but also a strategic innovation that would shift to institutional forms, structures, processes, human resource management systems, measurement systems, etc. that would not only support but actually require continuous innovation in the organization. Instead of operating like a “production line” organization that did the same thing over and over again according to well established procedures, police departments became a “job shop” that identified and responded to different particular problems of various sizes and shapes. That makes the organization not only responsive and adaptable to varied circumstances it faces, but also allows for the cumulative development and testing of methods that could be effective in dealing with problems they had seen before, and thought they had solved. The particular inventions and adaptations created in one organization could then be transferred to organizations that had not yet recognized the particular problem the first organization had identified, and was struggling to deal with the same issue.

Summary and Conclusion

The fundamental challenge facing RISE as it seeks to improve educational results in developing countries is to imagine a set of institutional arrangements and professional practices among those guiding and operating within national educational systems that could enable them to make sustained, rapid productivity gains with respect to their ability to achieve national educational goals. Those

national goals should include not only advancement in individual level learning, but also in achieving the larger, more aggregate social goals of promoting economic prosperity, developing tolerant societies, and ensuring strong polities in which all -- including those who are poor and/or oppressed -- have a chance to succeed, and upward mobility is a real possibility rather than a distant dream.

To accomplish this goal, national commitments to educational achievement that can engage the public at large, the voluntary sector, and the commercial sector are essential to provide both the room, the urgency, and the financing to encourage the innovations, innovators, and overall innovativeness in the system that can search for improved educational performance through innovations. That system has to be bold enough to try not only changes in classroom pedagogy for the mainstream, but also changes in classroom pedagogy for the pockets of the population that seem most difficult to reach and to teach. It also has to be bold enough to experiment with institutional changes at the school and national system level to allow the system to recognize and diffuse successful innovations quickly, and to encourage more individuals to think and act like innovators, and more institutions to increase their innovativeness.

Two big ideas dominate our imagination when we try to think about a national educational system that can learn. But these ideas gain their strength more from their appeal to different social and political ideologies than to hard-won knowledge about how the recommended institutions and practices would actually work. In all likelihood, because the educational system is itself a complex blend of the individual and the social, the market and the polity, a satisfactory system will be something different than the pure visions of a centralized system dominated by public goals, and guided by science, or a market system dominated by individual preferences, and guided by individual level knowledge of what seems good to them. The purpose of this paper has been to stimulate thought about what that mixed system should look like to enable national educational systems to get much, much better at searching for some particular points on the educational production possibility frontier for nations as a whole.

Bibliography

DiMaggio, Paul J. and Powell, Walter W. "Institutional Mimesis - The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields" (*American Sociological Review*, vol. 48, No. 2 April 1983)

De Jong, Jorrit, and Mayne, Quentin. "State Capabilities for Problem Oriented Government" (Ash Center Working Paper, Kennedy School of Government, Harvard University, 2018)

Garvin, David A. *Managing Quality: The Strategic and Competitive Edge* (Google Books.com, 1988)

Moore, Mark H. "Creating Efficient, Effective and Just Educational Systems Through Multi-Sectoral Strategies of Reform" (RISE Working Paper, 2015)

Moore, Mark H. "Public Value Accounting: Establishing the Philosophical Basis" (*Public Administration Review*, 2014)

Moore, Mark H., and Fung, Archon. "Calling a Public into Existence; The Political Arts of Public Management" in Donahue and Moore, *Ports in a Storm* (Brookings, 2012)

Moore, Mark H. "Learning While Doing: Linking Knowledge to Policy in the Development of Community Policing and Violence Prevention in the US" in *Integrating Crime Prevention* (Swedish National Council for Crime Prevention, 1995)

Moir, Lance. "What do we mean by corporate social responsibility?", *Corporate Governance: The international journal of business in society*, Vol. 1 Issue: 2, pp.16-22, (2001)

Pritchett, Lant. "Creating Educational Systems Coherent for Learning Outcomes" (RISE Working Paper 2015)

Pritchett, Lant. "The "Arbiter of Value" and the Industrial Organization of Basic Education" (RISE Working Paper 2017)

Pritchett, Lant. "What We Learned from our Baseline RISE Diagnostic Exercise" (RISE Working Paper, 2018)

Pritchett, Lant. "The Politics of Learning: Directions for Future Research" (RISE Working Paper 2018)

_____ RISE Vision, "Transforming Education Systems and Learning Outcomes"

_____ RISE Vision, "The Pivot from Schooling to Education"

_____ RISE Vision, "Ambitious Learning Goals Need Audacious New Approaches"

Rolleston, Caine. "Escaping a Low-level Equilibrium of Educational Quality" (RISE Working Paper 2016)

Schumpeter, Joseph. *Capitalism, Socialism and Democracy*, 2010

Stiglitz, Joseph, Rosengard, Jay K. *Economics of the Public Sector*, 4th ed (WW Norton, 2015, pp. 169-174)